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A PERSONALITY STUDY OF ONE HUNDRED UNSELECTED PATIENTS ATTENDING A GASTRO-INTESTINAL CLINIC[1]

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This is a study of 100 ambulant patients whose complaints (pain after meals, vomiting, nausea, belching, constipation, diarrhea, loss of weight with weakness, feeling of fullness, etc.) caused referral to a gastro-intestinal clinic. They do not necessarily indicate intrinsic gastro-intestinal disease. Beginning with the complaint, this is a study of personalities with similar symptoms.

This study is part of a comprehensive investigation sponsored by the departments of medicine, physiology and psychiatry. Any person attending the gastro-intestinal clinic during a 2-year period was considered an appropriate subject. The study was composed of four parts: (1) physical examination, (2) psychometric and Rorschach tests, (3) psychiatric study, (4) physiological fitness test. The latter was devised by Dr. George B. Ray as a possible test of autonomic stability, and is based on the effect throughout a period of breath holding, on the oxygen supply to the skin.

In attempting to analyze the personality of each patient we asked: What common denominators are there? What were the early emotional experiences of these patients? What is the health pattern and do they show characteristic reactions to illness and to other life situations? Is any organ preparation seen in the life history that might favor the development of gastric illness? Have these patients been preoccupied with food? Are there sufficient similarities in them to support the generalization that their basic character structure shows conflict regarding their dependency needs, or reveals any particular nucleus?

One thousand patients who go through the general clinic were used as the norm for nativity, sex, age, against which to compare this particular group of 100 patients attending the gastric clinic. In the general figure, 65% were native born, but in the gastric series only 50% are native born. The geographical population on which the clinic draws is primarily Italian, but includes Syrian and other European groups, and first and second generations. The religious denominations reflect these European origins; half were Catholic, 27% were Protestant, 25% Jewish. Sex distribution in the general clinic is 37% male, while in our series 55% were men. When the series was broken down into those with intrinsic or specific gastro-intestinal pathology and those without, 67% of those we call "organic" were men, against the usual clinic norm of 37%, and of the patients with ulcer (gastric, peptic, duodenal), 89% were men. Even where no demonstrable pathology exists, "non-organic" gastric complaints are more frequent among men in our series. Of the patients attending the gastric clinic, 63% had no specific pathology. Cases with intrinsic pathology include the following: (1) gastritis, (2) duodenitis, (3) gastric-peptic-duodenal ulcer, (4) colitis, (5) gall bladder diseases, (6) other gastro-intestinal diseases (not common enough for separate grouping). Confirmed ulcers constitute 20% of all cases.

The age distribution of our general group shows greatest incidence between 45 and 55 years of age.

The most characteristic thing about this group of patients was that they were exceedingly unhappy, deprived, thwarted individuals. One heard constantly of "aggravations," "worry" and "troubles." This was generally true throughout the entire life span. For instance, a striking proportion came from broken homes. At least 38% of these pa-

[1] Read at the 102nd annual meeting of The American Psychiatric Association, Chicago, Ill., May 27-30, 1946.

This study was done at Long Island College of Medicine under direction of Howard W. Potter, M. D. Mrs. Barbara Wood (Social Service Dept.) contributed substantially to the interview material.

tients had lost mother or father during the early years. Those with intrinsic organic pathology had somewhat more home stability than those without, as only 31% of the organic group had broken homes, while those with gastro-intestinal complaints but *no* specific findings showed 43% who had been similarly deprived. Thirteen percent of our entire group had lost father or mother before the age of 6. Two categories describing the way in which the home had met the patient's

AGE AND SEX DISTRIBUTION

IN RELATION TO THOSE WITH AND THOSE WITHOUT INTRINSIC PATHOLOGY

	Under 15, per-cent	15-25, per-cent	25-35, per-cent	35-45, per-cent	45-55, per-cent	Over 55, per-cent
Organic						
Male	2	4	8	18	30	6
Female ..	0	2	2	6	14	8
Non-Organic						
Male	0	4	2	15	7	4
Female ..	4	5	15	20	17	7

early emotional needs were set up: (1) the group whose early needs had been adequately met, and (2) the group whose early needs were met in a conspicuously inadequate way. If, for instance, the individual lived in marked poverty but the family was intact and there was love, this was considered emotionally adequate; if there was poor health within the family but cohesiveness and warm feeling, this was considered adequate. But when the patient described the home as marked by "extreme cruelty," "never a kind word from my father," "always felt abused and neglected," then we accepted the patient's version that his early emotional needs were inadequately met. Attitudes like the following were expressed: "I always felt I was treated worse than anyone in the family," or, "I was in the middle, kind of ignored, I never felt like anything." Over half of our group—55%—felt that in their early life they were deprived, abused, neglected. In this group again, those patients with intrinsic pathology had somewhat better backgrounds, as 54% of the organic group came from adequate homes, while 41% of those without organic disease had similar experiences.

Although so many of the group have described their homes as inadequate, it seems likely that this figure still does not include all those whose emotional needs were not appropriately met in childhood, as some of the patients were protective of their life experiences, or finally able to dismiss them. One woman who described her early life as adequate could not remember the size or composition of her family!

Although favoritism of a parent for a child is frequently a subtle phenomenon, 18% tell of a brother or a sister being the preferred one. These memories represent vivid experiences in their lives. Our material indicates no bias in terms of ordinal position: 44% of the group were either a first child, an only child, or a last child.

The school and work opportunities also show deprivations. Twenty-four percent of these patients had left school before the sixth grade; some had never attended school. Parallel was of course found in vocational history, namely, that over half of these individuals were working before 14 years of age.

Some observers have indicated that when patients have difficulties referable to a particular organ or tract, they show a long history of allied experiences around that particular system. When the general health history was explored, most conspicuous was the fact that very few of these subjects had poor health. Specific illnesses and operations were investigated. Exclusive of their gastric history, 55% of the group had had good or very good health both as children and adults, and here again the group with specific findings had the more stable background. Sixty percent of the patients with intrinsic gastro-intestinal pathology had excellent health records, but only 50% of those without specific gastro-intestinal pathology had similarly good health records. It was striking that of the entire group, only 4% had a history of poor health both in childhood and adult life, and all of these turned out to be in the group with complaints but no intrinsic pathology. The entire group with organic findings did not produce *one* patient with a completely poor health record, as only one patient in the whole organic group had had poor health in childhood, and by adult life his health was again good.

Marked, too, was the previous lack of concern about the gastro-intestinal tract. In line

with this, there were no significant correlations with early attitudes toward food and elimination. The eating difficulties were negligible. Only 10% of the organic cases had feeding or eating difficulties in childhood and 16% of the non-organic cases had similar histories. Most of the patients described their eating habits as "always a good eater," "I enjoyed everything," or, "always liked to eat." On the whole, early food habits were neutral: there was almost no history of food idiosyncrasies or vomiting in childhood.

Only a relatively small number of patients recalled constipation in childhood. Adult constipation was present in 20% of the organic group and in 37% of the non-organic cases. These figures had to be checked carefully in terms of diet and frequency to avoid misusing for a fact such statements as one patient made about constipation, for which he had come to the clinic. "Always had trouble. Never could go to the toilet. Have just one bowel movement a day and am sure that doesn't clean me out!"

The earliest symptoms referable to the gastro-intestinal tract were explored: this included any complaint at any time persistent enough to be counted a symptom, *i. e.*, extreme vomiting when pregnant, eating disorders in childhood, diarrhea on going into the Army. All symptoms of which each patient complained are compared between the two groups. The most common symptoms are as follows:

FREQUENCY OF SYMPTOMS

	Pain, percent	Vomiting, percent	Nausea, percent	Blood in stools, percent	Weakness or wgt. loss, percent	Belching, percent	Diarrhea, percent	Constipation, percent
Organic (Intrinsic Pathology)	93	45	2	10	35	32	6	20
Non-Organic (Without Pathology)	89	24	22	13	28	40	10	37

It is seen that the primary symptom which brings patients to the gastric clinic is pain or marked discomfort, and both groups reported pain with almost similar frequency. The nausea symptom is of interest, for in those patients with specific pathology *nausea* was negligible as a complaint, while in the group without findings it was present in 22%. Yet this group without intrinsic pathology had only half as many complaints of actual *vomiting* as did the organic. It is as if the distressed organism, looking about to express its dissatisfaction, is still protective enough to spare the individual too much discomfort, or would, perhaps, indicate that the stimulus for actual regurgitation operates at a higher threshold. The blood in stools looks appallingly high for cases finally called non-organic, but this complaint was based upon their report of perhaps once seeing bright red blood, the source apparently innocuous. The nausea, belching, diarrhea, are all reported more frequently in the patients without specific pathology.

Both the patients with specific gastro-intestinal findings and those without, show marked chronicity which ranged from several weeks to over 20 years. Sixty-three percent of the organic and 53% of the non-organic cases had had complaints 5 years or less. The median number of years of chronicity in the organic and non-organic was the same: 4 years. Twenty-seven percent were having their first episode or were within one year since onset of first symptom. When we take those patients whose symptoms had been present off and on from 5 to 20 years, the non-organic ran 50%, while the organic were 45%. Thus, patients with greatest chronicity were distributed almost equally over both groups. This raises the question of additional understanding about the common conception that after sufficient chronicity and repeated wear and tear, definite intrinsic pathology arises.

Preparation for Gastro-Intestinal Illness.—Are there indications in the health histories of preparation for eventual gastro-intestinal illness or distress? Only 25% of *all* the organic cases showed previous preparation and only 3 of the ulcer cases showed this. An example of possible preparatory experiences was seen in a 46 year old man—a street cleaner for 17 years—who had had 9 operations, and a 49-year-old single man who had grippe followed by hemoptysis which set off his gastric complaints. Out of

the entire female population in the total group, 36% had had first gastro-intestinal complaints in relation to pregnancy, miscarriages, menopause and gynecological operations.

Work Adjustment.—Half of the patients said they were dissatisfied with their jobs and changed frequently, worried about not making enough, or felt the work was too strenuous. Negligible, however, were the few cases who did not make great effort to work and meet obligations. Essentially, work records showed them to be hard-working but very dissatisfied with their work. Here the organic and non-organic showed almost identical trends, as only 54% of the organic group and 50% of the non-organic group liked their work or accepted it well, a pathetic commentary on these lives practically dedicated to work.

Marital Adjustment.—Marital adjustment of this group was conspicuously poor. A striking 54% considered their marriages disappointing, frustrating, unhappy. One woman said, "Things were terrible until my children and I could leave my husband. He was revolting, things were horrible when he was there." Or—"I am sorry I ever married. I should have gone into the church." Or—"My husband goes out to visit his friends alone. That is how his people are. It is very lonely. You never know until you are married."

Eighteen percent of the total group were sexually maladjusted single individuals. To avoid controversy, all singles under 25 years of age were excluded. When these are included with the large group of maladjusted married ones, the total is impressive. Fifty percent of the organic and 57% of the non-organic cases had unhappy marriages. Thus, marital adjustment was almost equally poor in the two groups. The two areas in which the groups coincide are in the marital and vocational maladjustment. When one considers that the material in the socially censured categories is more apt to be understated than in the other direction, it is not unlikely that unsatisfactory marriages were even higher than this amazing figure.

Where do these sexual and marital misfits come from? What was their early life, what were their early relationships? Sixty percent of the patients with poor marriages come from homes previously described as conspicuously "inadequate" in terms of providing sufficient emotional warmth or protection, or even sufficient attention. Of the single individuals over 25 years of age who had been unable to marry, 70% came from the same kind of inadequate home. Conversely, in the group of marriages described as satisfactory or good, 65% came from backgrounds previously classified as "emotionally adequate."

In terms of these observations and additional interview material, we worked out the basic character structure in each patient and then grouped those with similar characteristics into 6 categories, 3 of which described patients who were more or less adequate, and another three describing those who showed neurotic characteristics.

I. Although few of the patients could be described as having no problems, in the *"adequate"* group were persons who were pretty well put together, who had sufficient balance to cope with problems or disappointments, who could exercise choice and find suitable outlets for gratifications. Such a case was the following:

A 25-year-old British seaman came to the clinic complaining of epigastric pain, weight loss, poor appetite, and vomiting after meals. In his 5 years in the R.A.F., he functioned so adequately in combat flying that he received the D.F.C. at Buckingham Palace. After his 71st mission, 4 members of his family were killed in the blitz and another brother in combat. The patient did not break down then but after 3 subsequent missions was wounded in the knee and shoulder, and because of this was discharged. He entered the Merchant Marine Service and found the work dull. Despite his long flying experience, he became seasick and began to develop the gastric symptoms described. He was a poised, quiet young man who spoke freely and with feeling. This patient is termed an "adequate individual" without any intrinsic gastro-intestinal pathology.

A sample case showing definite organic pathology but with adequate personality:

A 46-year-old sailor—one of 13 children—who had been in the Navy at 15 and had subsequently had a long hard life at sea in the Merchant Marine. There was a history of gastric ulcer with surgical treatment but the patient felt that this current episodic distress was related to the poor food on his ship. He had been on convoy during the war; once, 32 out of 64 ships were sunk. His recent ship had such a bad reputation about its cuisine that it was

called the "Hungry Goose" by other merchant mariners. He was not aware of unusual fear or worry during these trips. He was a controlled, likeable person with a healthy attitude toward his illness.

II. There were individuals who functioned adequately except for being chronic worriers. A sample of this category of *"adequate although chronic worriers"*:

A 39-year-old man came to the clinic complaining of pain and constipation of 6 years standing. He had been an orphan at 11 and lived with an aunt. The patient had worked in a paint factory for 12 years. The job was dangerous and offensive, but it paid well and allowed him to support his wife and two children. Four years after he had pain and felt "blown up" he decided that though he would earn less, he would change his job. "Before, my life belonged to my children—now it belongs to me." Although the patient is somewhat inclined to worry about his health, he functions very well.

III. The third and last division of the well-adjusted was a group termed *"adequate at a low level."* A sample case:

A 42-year-old, roly-poly, placid little man with an almost constant beaming smile. He never married, and until he was 30—when his mother died—lived at home. He now works as a laborer and lives with his mentally retarded 37 year old brother, assuming full financial responsibility for him. He is of low average intelligence but is content, functions well and shows no excess tension or conflict.

This concludes the *adequate group*. They were hard-working individuals who carried responsibility well and were not unhappy or distressed persons. They comprised 41% of the entire group. The organic group contributed 60% of them, and the non-organic only 40%.

The second large category consisting of 59% of the total group, were the ones with *faulty adaptation, the neurotic or inadequate group*.

I. The first division includes the nervous-tense individuals, those who were shy, uneasy, cried easily, were irritable with the children.

A 43-year-old woman with gastric symptoms of 4 months duration indicates the basis for this grouping. Since her sister was found to have inoperable cancer 2 years ago, the patient fears she might have a similar tumor. She was brought up in a strict, prohibitive and dreary household. At 27 she married and the following year had a daughter, but could not have a second child until she was 37 years of age. The 15 year old daughter rebels at too many household tasks, and says the mother is nagging and nervous. The new child, a boy, was greatly desired but complicates this simple household where the patient does all the work. She is a hard-working, sober person who worries constantly, and feels things pile up on her until she cannot cope with them.

II. The second inadequate group is composed of individuals with maladjustments but no outstanding neurotic symptoms.

A taxi driver said he worked too hard, hated his work but could not support his family any other way. He said, "Driving a cab is bad for my bowels, no wonder I'm constipated." Another man, 43 years old, complained of never having any personal relationship to anyone. Although very attached to his mother, when she died he did not even cry or feel sad. Although he is married and has 3 children, he has never had much interest in his home or family and is glad to be away at sea. He said, "I never had a friend, a love or a passion, never a worry or concern. Even danger and death do not faze me."

III. These two inadequate groups overlap the third and last group: those people with marked faulty adaptation who exhibited neurotic symptoms. This includes a patient who had a traumatic neurosis following an accident, a psychopath who used his gastric symptoms to evade war service, and a person with striking vocational disability and sexual impotence.

The latter is a 37-year-old man, currently unemployed, with many of his unpleasant vocational experiences associated with somatic disturbance. He married at 28 over the objections of his mother, with whom he was very much identified. Two years after his marriage he and his wife returned to their honeymoon spot for a vacation; there for the first time he became ill, vomited, had abdominal discomfort, heartburn, diarrhea and weight loss. He returned to work though in pain but no job was satisfactory. He had 4 jobs in rapid succession, and finally took an elevator job, which he disliked as he jumped at sounds, could not tolerate the flashing lights nor the constant standing. The marriage became affected by his chronic ill health and his vocational inaptitude. His wife, who had returned to work to maintain them, complained that he would not accept jobs and has decided to leave him unless he makes a heroic change. He has now developed into an individual who is unable to assume vocational and marital responsibilities.

The patients who fell into these three categories of faulty adaptation made up 59% of all patients in the series. Those with organic ailments contributed but 30% of this group, as might have been anticipated in

terms of previous comparisons between the organic and non-organic groups.

An understanding of how these patients had developed was furthered by the final analysis of the relationship in their lives between the precipitating factors, the amount of adult stress to which they had been exposed and the kind of childhood they had had.

Precipitating Factors.—Only 37% of the cases with organic pathology showed any disturbing life situation which was closely related to the symptom or the illness, while in the non-organic group a precipitating factor was even less important since only 25% showed a relatively crucial, direct relationship. The total number of patients who showed a precipitating factor was only 30%.

Adult Stress Situations. A much more significant factor was that of a stressful and wearing adult life, arduous and demanding overwork, complete lack of social life or recreational outlets, constant struggle with meager finances and ill health in the family. For example:

> One woman whose daughter was killed in an accident 4 years ago, then centered all her hopes on her son. Now at 15, he has developed a serious cardiac condition. Five months ago, her husband, to whom she is devoted, suffered a third degree burn. She now cares for her husband and her house beside working in a factory. Although she sets the alarm clock, she keeps waking for fear she will not hear the alarm and will fail to get to work on time.

Forty percent of the total group showed such adult stress. Again the material indicates that whereas only 17% of all organic cases revealed conspicuously loaded stress situations, in the non-organic group, many more were subjected to such wear and tear (32%).

Childhood Stress. Of those from emotionally inadequate childhood homes, only 30% were stable individuals, but when we studied the fate of those who came from adequate or secure backgrounds, 60% showed good emotional health. Thus, exactly twice as many patients from adequate homes developed into reasonably well-adjusted adults as those from inadequate homes, *irrespective* of additional factors.

When childhood experiences were correlated with (a) adult stress and (b) precipitating factors, those who had not been given warmth and stability in childhood were the most vulnerable if one or both of the other factors occurred. Thus, the precipitating factor—unless in combination with other factors—did not have much importance in the final adjustment.

Common Denominators and Trends in the Entire Series

1. More men than women had gastro-intestinal complaints with or without intrinsic pathology. The group was essentially middle aged.

2. This group came from large families, lived at low economic level, left school early, showed high incidence of deprivation in childhood. A conspicuously large number came from homes where there was insufficient love or attention, and many were exposed to extreme hardship. The group that had *no* intrinsic or specific gastro-intestinal pathology had the greatest degree of instability and deprivation and stress in their lives.

3. Health history was essentially good both in childhood and adult life in entire series. There was little evidence of existence of organ preparation for the illness. Very few of the patients had had either feeding or eating difficulties in childhood. Diarrhea or constipation was also present in very few cases in the formative years. These findings are not in accord with some observers who emphasize that these patients have life-long preoccupation with gastro-intestinal tract.

4. Both those with and without intrinsic pathology showed a great deal of chronicity but there was little difference between the two groups. This would suggest that the often heard comment that morphological changes occur with chronicity does *not* tell the whole story. Some patients without any intrinsic pathology had had symptoms for over 20 years!

5. Pain or discomfort is the chief symptom which brings patients to a gastric clinic. The patients *without* specific pathology had similar symptoms and more of them.

6. Psychosexual adjustment was conspicuously poor: half of the series complained that their marriages were failures and disappointments. Family formation

showed no significant correlation with happy or unhappy marriages.

7. Vocational adjustment was very poor. Most characteristic of the group, however, was the fact that they were extremely hard-working people, who took good care of their families.

8. There was evidence of long time *stress* in their lives, paralyzing life situations, no social life or vacations, many misfortunes over a long, hard period. There was much less evidence of precipitating factors, and it did not have much importance except when correlated with either unstable *early life* or difficult *adult stress*.

9. Striking among the cases with specific intrinsic pathology was an oft repeated comment "I never worry." Very few were aware of tension or stress or undue concern. They were the least willing to be interviewed at first.

10. Many of the women had their first gastro-intestinal complaints in relation to menses, pregnancy or menopause.

11. The basic personality showed great variation in both groups. While emotional factors were demonstrable in both groups, there was greater evidence of it in the group without intrinsic pathology; also, there were more maladjusted and immature people within *that* group. There were as many variations in character structure as one might encounter in psychiatric clinic or psychoanalytic practice. There were alcoholics, aggressive individuals, those with sexual conflicts, some somatically fixed, and combinations of these, some independent and mature in the face of great hardship, some inadequate, clinging, some tense or maladjusted, others resourceful or competent within the limitations of their meager potentialities. Certain life situations could not be coped with but these were not necessarily ones involving dependency needs. The same factors which, in general, make for faulty or immature or neurotic behavior, operated in these patients who were maladjusted. There was no specificity.

Some of the formulations of previous observers have been exaggerated by avid followers out of proportion to the original facts. The material in our series would indicate that specific gastro-intestinal illness cannot be correlated with any one personality type marked by a pre-potent need. On the contrary, from our data it is apparent that specific or intrinsic illness occurs in a variety of personality types, marked by different psychological constellations. Details of these personality types and the mode of correlation must be established in each case.

CLINICAL EVALUATION OF THE F SCALE ON THE MINNESOTA MULTIPHASIC PERSONALITY INVENTORY

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The F scale on the Minnesota Multiphasic Personality Inventory is of particular interest in view of the problem of determining, at times, the validity of a particular profile. This scale serves to check on the validity of the entire inventory but it appears that with some subjects, a high validity score does not necessarily invalidate the entire test.

This test has been fully described by Hathaway and McKinley (1) in their *Manual for the Minnesota Multiphasic Personality Inventory* to which reference may be made for complete details. In an attempt to assess various phases of the total personality, groups of statements have been devised to which true, false, or cannot say responses may be given. The profile consists of various scales including hypochondriasis, depression, hysteria, psychopathic deviate, masculine-feminine interest, paranoia, psychasthenia, schizophrenia, and hypomania. There are, in addition, question and lie scales for recording validating scores, but as mentioned, the F scale is for the validity score as a check on the entire record. The F score is derived from a group of 64 items which normal persons are said to answer very infrequently in the scored direction. Few of the items are intercorrelated to a significant extent and, according to the *Manual,* they indicate whether or not the subject has given responses that are avoided by most persons. A high score is not regarded as indicative of any known pattern of symptoms. Likewise, according to the *Manual,* F scores may be validly high for certain persons who are most often of two types. "Highly individual and independent" persons may honestly make the infrequent responses, and a number of "badly neurotic or psychotic subjects" may validly obtain high F scores. All of the items for the F scale are answered in the infrequent direction less than 10 percent of the time by normals and the percentage is "but little higher for miscellaneous abnormal subjects." With these exceptions, scores above 70 indicate the entire record to be invalid. The lack of validity may be due to clerical errors on the part of the person grading the test, or carelessness or poor comprehension on the part of the subject.

Hathaway and McKinley derived their normative data from a sample of about 700 persons representing a cross section of the Minnesota population. These were visitors to the University Hospitals and the sampling was considered fairly adequate for males and females between the ages of 16 and 55. Normative data were also available on pre-college and college students, WPA workers, and epileptic and tuberculous patients. The clinical cases, for comparison, were available from over 800 studied on the neuropsychiatric division of the University Hospitals.

Kazan and Sheinberg (2) have studied the F scale on this inventory and their work was done at an army personnel consultation service. The maladjusted subjects were said to range from situational problems to pre-psychotic personalities and they expressed the opinion that such a group would presumably correspond to the one studied by the originators of the M.M.P.I. They administered the test to 170 patients and concluded that "a number of rather badly neurotic or psychotic subjects obtain high F scores validly." Of these 170 patients, 35 had definitely valid pathological F scores of 70 or above. The diagnoses were psychoneuroses, 18, of which 4 were severe, 11 moderate, and 3 mild; constitutional psychopathic state, 8; inadequate personality, 3; situational maladjustment, 2; psychotic and pre-psychotic, 4. It was believed that 75 percent of the patients with a valid high F score should not have been inducted into the Army and would not have been inducted with adequate psychiatric screening measures. It was concluded that a high F score on the M.M.P.I. was only very rarely an invalidating factor in the consideration of abnormal subjects. Generally it indicated significant and often severe psychiatric disease.

The author studied the M.M.P.I. profiles

[1] Branch United States Disciplinary Barracks, Camp Cooke, California.

of male prisoners at a United States disciplinary barracks to which they were sent following conviction by general courts-martial. Although these prisoners were in a maximum security installation at the time of study, the majority were actually medium security material, many having been transferred from a medium security installation as a result of curtailment in the number of such installations. The diagnoses of these prisoners were essentially the same as those given in a previous report(3) with the exception that the cases in general appeared to be of slightly lesser severity, and the number of overt psychoses were fewer. A study of the aforementioned diagnostic data revealed that the majority of cases were various types of character and behavior disorders according to the criteria outlined in the official nomenclature currently employed by the War Department(4). The technique of administration and scoring the M.M.P.I. was, with few exceptions, that outlined in another report(5).

The profiles of 140 inventories were studied carefully. Seventeen of these profiles had a validity score of 70 or above. Seven of the 17 were believed indicative of an invalid test on the basis of inability of the subject either to read the statements satisfactorily or to understand adequately the meaning of the statements. The remaining ten inventories with abnormal validity scores were considered valid and it appears that the abnormal scores on the F scale served as additional indicators of the severe personality disturbances in the examinees. Seven of the abnormal F scores were 80, two were 73, and one was a borderline 70. Of the profiles with an F score of 80, all except one had four or more additional abnormal scores on the nine personality scales. The one exception had three abnormal scores.

The diagnoses of these subjects were schizophrenic reaction, unclassified—3; schizoid personality—1; alcoholism, chronic, severe—1; aggressive reaction—1; inadequate personality—1; antisocial personality—1; anxiety reaction, chronic, severe—1; and one case had a very severe personality disorder which would probably be referred to by some as indicative of a "psychopath" and by others as a schizophrenia. The prisoner with the borderline 70 on the validity scale also had a high lie score. Within a few weeks after the test was taken, psychotic features became even more pronounced than at the time the test was given.

Although the validity of a test with a high F score in some cases of severe neuroses or some cases of psychoses was mentioned by Hathaway and McKinley, it appears that this fact may not be fully appreciated at times. The author has encountered profiles of subjects with several abnormal scores and high F scores with corroborative material clinically and in anamnestic data to warrant acceptance of the tests as valid, the personality disturbances of the subjects being severe. Such test results, nevertheless, were regarded by the examiners as invalid because of the high F scores, despite evidence to the contrary offered by the originators of the test. In an occasional case, recession of the abnormal scores to within normal limits accompanied by clinical improvement, revealing also a recession of the F score to within the normal range has been observed by the author.

On the basis of individual interviews with almost a thousand prisoners and varying degrees of contact with a few hundred in addition, together with the examination of several hundred M.M.P.I. profiles, an impression has been gained that the test, although undoubtedly of some assistance in diagnosis, is somewhat deficient as a diagnostic aid in work with this prison population. The test appears to be attuned more for the detection of defects in relatively clearcut cases of neuroses and psychoses or cases showing the usually encountered neurotic symptoms. The majority of the prison population is comprised of character and behavior disorders of many types as indicated in the report on diagnoses previously mentioned. Some of these character disorders show profiles bearing several abnormal scores with or without a high F score. Other cases are completely missed by this inventory despite unquestionable clinical and historical evidence of severe personality disturbances. The M.M.P.I. if used judiciously may be helpful, but its limitations in the case of character and behavior disorders should be recognized. The F score appears, in these cases, to be no more able to indicate a severe personality disturbance than does the inventory as a whole. This

may account, perhaps to some extent, for the occurrence of a smaller percentage of high valid F scores in this series of cases than in the series of Kazan and Sheinberg.

BIBLIOGRAPHY

1. Hathaway, S. R., and McKinley, J. C. Manual for the Minnesota Multiphasic Personality Inventory. Revised Edition, New York; The Psychological Corporation, 1943.

2. Kazan, A. T., and Sheinberg, I. M. Clinical note on the significance of the validity score (F) in the Minnesota Multiphasic Personality Inventory. Am. J. Psychiat., 102: 181-183, Sept., 1945.

3. Schneck, J. M. Psychiatric diagnoses of military offenders. Am. J. Psychiat., 104:325-328, Nov. 1947.

4. Nomenclature and Method of Recording Diagnoses, War Department Technical Bulletin, TB MED 203, 19 October 1945, War Department, Washington 25, D. C.

5. Schneck, J. M. A method for group administration of the Minnesota Multiphasic Personality Inventory. The Military Surgeon (in press).

THE DOUBLE-SPIKE PATTERN ON THE MINNESOTA MULTIPHASIC PERSONALITY INVENTORY

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The double-spike pattern on the Minnesota Multiphasic Personality Inventory (M.M.P.I.) profile consists, according to the criteria to be outlined, of elevations on the psychopathic deviate and hypomania scales with concurrent, specific relationships to the remaining personality scales.

There exists a steadily increasing literature on the M.M.P.I. For complete basic details regarding the inventory reference may be made to the *Manual* by Hathaway and McKinley(1). These authors have also prepared a series of publications outlining its construction and development(2-7). Various aspects of the inventory have been discussed by Schiele, Baker and Hathaway(8); Leverenz(9); Meehl and Hathaway(10); Abramson(11, 12); Benton (13); and Modlin(14).

Considering the importance of the arrangement of the several personality scales for discerning the double-spike pattern, it should be recalled that the 3 validating scales, Question (?), Lie (L), and Validity (F), are succeeded by 9 personality scales in the following order: hypochondriasis (Hs), depression (D), hysteria (Hy), psychopathic deviate (Pd), masculine-feminine interest (Mf), paranoia (Pa), psychasthenia (Pt), schizophrenia (Sc), and Hypomania (Ma).

The material for this study consists of 221 M.M.P.I. profiles of male military offenders confined at a United States disciplinary barracks. The diagnoses of a similar group of subjects were discussed in another publication(15); the majority consisted of a variety of character and behavior disorders classified according to War Department nomenclature (16). The number of psychoses among the current group was less than that among the previous group. The attempt at correlating the M.M.P.I. profiles with specific diagnoses is a task beyond the scope of this paper.

All the profiles are valid. In a few instances the validity (F) score is a borderline 70 (T-Score) or above but the validity is unaffected, nevertheless, in accordance with findings presented in the preceding paper in this issue and the conclusions drawn by Hathaway and McKinley(1), and Kazan and Sheinberg(17). The inventories, incidentally, were administered to the subjects in groups of varying size(18).

The psychopathic deviate scale was devised to measure the similarity of the subject to persons with difficulties in the realm of ability to profit from experience, adaptation to social mores, and capability of exhibiting adequate emotional responses. The most frequent digressions of this group, according to the originators of the inventory, consist of lying, stealing, alcoholism or drug addiction, and sexual immorality(1). The Ma scale was devised to measure the personality characteristics of subjects with marked overproductivity in thought and action(1). The various relationships between the psychopathic deviate and hypomania scales have been discussed at length by McKinley and Hathaway (7).

Some of the offences of the subjects studied consist of AWOL, desertion, theft, assault, misuse of government property, insubordination, and other actions resulting in conflict with military authority. Lying, stealing, sexual promiscuity, and alcoholism were frequent.

On casual inspection of these profiles the impression was gained that the psychopathic deviate and hypomania scores were not infrequently sufficiently elevated above the others to warrant the designation of "double-spike pattern." An initial survey revealed, however, that only 10 profiles had both the psychopathic deviate and hypomania scores 70 or above with the remaining scores below 70. Further study disclosed that the impression of a double-spike was obtained on other profiles and that those with a double-spike pattern seemed to fall into 4 classes henceforth designated as Ia, Ib, Ic, and II. These classes may be described as follows:

Ia. Pd and Ma are 70 or above; other scores are below 70.

Ib. Pd and Ma are 60 or above with Pd

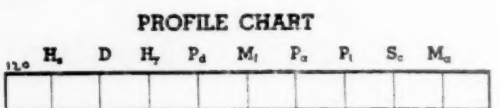

FIG. IA.

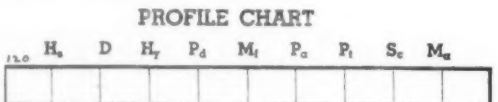

FIG. IC.

FIG. IB.

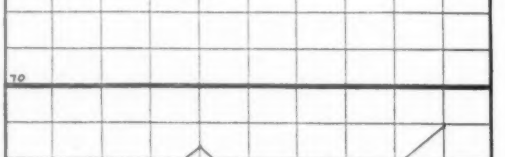

FIG. II.

and/or Ma between 60 and 70; other scores are below 60.

Ic. Pd and Ma are 50 or above with Pd and/or Ma between 50 and 60; other scores are below 50.

II. Pd greater than Hs, D, and Hy; Ma greater than Mf, Pa, Pt, and Sc.

The number of profiles in the aforementioned classes are: Ia=10; Ib=11; Ic=3; II=35. The total of Ia, Ib, and Ic is 24. The total of Ia, Ib, Ic, and II is 59. Thus 59 (26.7%) of 221 profiles studied fall into the double-spike pattern according to the criteria outlined.

Since a significant psychopathic deviate elevation is frequently considered 70 or above, the profiles were reviewed with this in mind and the results revealed that 65 (29.4%) of the 221 profiles showed Pd to be 70 or above as compared to the 26.7% of the total falling into classes Ia, Ib, Ic, and II. Of the 65 profiles with Pd equalling 70 or above, 25 fit into the above-mentioned classes as follows: Ia=10; Ib=4; Ic=0; II=11. Thus 34 profiles in these classes remained outside the group which had Pd equalling 70 or above.

It is known that often a particular score warrants attention as a possible indicator of an important personality trend even though that score does not reach a level of 70

(T-score) or above. Thus a score between 60 and 70, if it is several points higher than the remaining scores, may at times point the way for fruitful investigation. With this in mind, the 221 profiles were reviewed for Pd scores below 70 but higher than the other scores regardless of the number of points difference. Twenty-six profiles falling into this category were discovered. Ten of these 26 likewise fit into the classes mentioned above as follows: Ia=0; Ib=1; Ic=0; II=9.

When the profiles among Classes Ia, Ib, Ic and II with Pd equalling 70 or above, or with Pd below 70 but higher than the remainder, are subtracted from the total in the above-mentioned classes, 24 profiles still remain.

Of the 65 profiles with Pd 70 or above, 25 (38.5%) are included in Classes Ia, Ib, Ic, and II. Likewise, of the 26 profiles with Pd below 70 but above the remainder, 10 (38.5%) are included in these classes.

In presenting these data no attempt is made to replace the currently accepted criteria for pathological deviation on the psychopathic deviate and hypomania personality scales. It has, however, appeared worthy of mention that certain relationships between these 2 scales and the remaining scales warrant further study. It is possible too that recognition of the double-spike pattern, so designated in accordance with the criteria outlined, may have diagnostic value and thus supplement the currently accepted criteria for critical evaluation of Pd scores on certain profiles.

This formulation of the possible significance of the double-spike pattern must, however, remain tentative because there is an unavoidable absence of control material. A study of the occurrence of the double-spike pattern in a "normal" group must be made, and a similar study among a neuropsychiatric group devoid of overt conflict with authority appears to be indicated. Further surveys of profiles among different classes of offenders should be additionally enlightening. None of these studies was possible at the time this series of profiles was reviewed, and investigators having access to a variety of subjects should be able to test the validity and significance of these findings.

BIBLIOGRAPHY

1. Hathaway, S. R., and J. C. McKinley. Manual for the Minnesota Multiphasic Personality Inventory. Revised Edition, New York, The Psychological Corporation, 1943.

2. Hathaway, S. R., and J. C. McKinley. A multiphasic personality schedule (Minnesota). I. Construction of the schedule. J. Psychol., **10**:249-254, 1940.

3. McKinley, J. C., and S. R. Hathaway. A multiphasic personality inventory (Minnesota). II. A differential study of hypochondriasis: J. Psychol., **10**:255-268, 1940.

4. Hathaway, S. R., and J. C. McKinley. A multiphasic personality schedule (Minnesota). III. The measurement of symptomatic depression. J. Psychol., **14**:73-84, 1942.

5. McKinley, J. C., and S. R. Hathaway. A multiphasic personality schedule (Minnesota). IV. Psychasthenia. J. Applied Psychol., **26**:614-624, Oct. 1942.

6. McKinley, J. C., and S. R. Hathaway. The identification and measurement of the psychoneuroses in medical practice. J. A. M. A., **122**:161-167, May 15, 1943.

7. McKinley, J. C., and S. R. Hathaway. The Minnesota Multiphasic Personality Inventory. V. Hysteria, hypomania and psychopathic deviate. J. Applied Psychol., **28**:131-144, April 1944.

8. Schiele, B. C., Baker, A. B., and S. R. Hathaway. The Minnesota Multiphasic Personality Inventory. Journal-Lancet, **63**:292-306, Sept. 1943.

9. Leverenz, C. W. Minnesota Multiphasic Personality Inventory. War Med., **4**:618-629, Dec. 1943.

10. Meehl, P. E., and S. R. Hathaway. The K factor as a suppressor variable in the Minnesota Multiphasic Personality Inventory. J. Applied Psychol., **30**:525-564, Oct. 1946.

11. Abramson, H. The Minnesota Personality Test in relation to selection of specialized military personnel. Psychosom. Med., **7**:178-184, May 1945.

12. Abramson, H. Effects of alcohol on the personality inventory. Psychosom. Med., **7**:184-185, May 1945.

13. Benton, A. L. The Minnesota Multiphasic Personality Inventory in clinical practice. J. Nerv. and Ment. Dis., **102**:416-420, Oct. 1945.

14. Modlin, H. C. A study of the Minnesota Multiphasic Personality Inventory in clinical practice with notes on the Cornell Index. Am. J. Psychiat., **103**:758-769, May 1947.

15. Schneck, J. M. Psychiatric diagnoses of military offenders. Am. J. Psychiat., **104**: 325-328, Nov. 1947.

16. War Department Technical Bulletin (TB MED 203) Nomenclature and Method of Recording Diagnoses, October 19, 1945, War Department, Washington 25, D. C.

17. Kazan, A. T., and I. M. Sheinberg. Clinical note on the significance of the validity score (F) in the Minnesota Multiphasic Personality Inventory. Am. J. Psychiat., **102**:181-183, Sept. 1945.

18. Schneck, J. M. A method for group administration of the Minnesota Multiphasic Personality Inventory. Mil. Surgeon (in press).

PSYCHOLOGICAL OBSERVATIONS OF PRISONERS OF WAR [1]

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The author of this communication, in company with several other German psychologists, was interned as a prisoner of war in Canada during World War II. While so interned he and his colleagues made systematic observations of the psychological effects of imprisonment. These observations were extended over two years; careful notes were made and the data were treated statistically. The studies were conducted principally in an internment camp where the number of prisoners ranged from 10,000 to 12,000 during the period in which the observations were carried on.

The purpose of the study was to determine what psychic effects might be due specifically to the restriction of liberty. In the observations on the psychology of prisoners, previously reported in the literature, it is hardly possible to separate other factors such as hunger, forced labour, lack of suitable accommodation, from the factor of restriction of liberty as such in the production of psychic manifestations. Conditions in Canada, however, made this distinction possible to a certain extent, inasmuch as the accessory factors above mentioned were not present in the Canadian camps, as will be noted presently in outlining the conditions under which the prisoners lived. Moreover, the observers had favorable opportunities for comparison by reason of similar observations that for several years they had conducted on German army groups in various theatres of war.

The conditions under which the prisoners of war in Canada were studied were briefly as follows: Food was always sufficient; the accommodation provided corresponded with that of German barracks (including community rooms, quarters heated in winter, good sanitary arrangements); during the period of observation there was no forced labour; prisoners were allowed to wear the German uniform, and in addition Canadian prison clothing was also issued; cultural and recreational facilities were provided, including educational classes, concerts, camp libraries, theatrical performances and religious services; the camp areas were such as to provide grounds for athletic and sport events.

In obvious agreement with arrangements for Canadian war prisoners in Germany, the regulation of the internal affairs of the camps of the German prisoners was left to the prisoners themselves. Likewise in correspondence with National Socialistic usage in Germany at that time (1942-44), certain restrictions were imposed. These included censorship of the post by German officers, prohibition of newspaper reading without special permission, prohibition of conversation with Canadians except in the presence of a designated interpreter, limited delivery of incoming books and newspapers. By uniform supervision of instruction and the lectures that were given, a strictly uniform type of education was aimed at, which in view of the conditions just noted necessarily produced a limitation of mental liberty and sense of isolation.

The prisoners concerned in this study ranged in age from 18 to 60 and came from various branches of the armed services. Most of them had been imprisoned 4 to 5 years.

As a result of his observations the author believes he can safely say that, even with long confinement under the conditions as stated, no abnormal mental reactions can be demonstrated that can be attributed to the restriction of freedom occasioned by imprisonment. This statement applies only with respect to the restriction of liberty as determined by the conditions described. Reactions occurring during the initial period of imprisonment (about 2 months) have not been taken into consideration.

The number of persons with psychopathic symptoms referred to the camp physicians for examination and treatment was not greater than was commonly found in units of similar size in the German Army in the native country of the prisoners. There was only the occasional pathological case.

The observers, living with the prisoners throughout the days and for a long stretch

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of time, did not find more evidences of neurosis than they had observed under other than imprisonment conditions among persons living in close association (barracks, camps, etc.). Likewise, cases of mass excitement were not observed which differed from similar symptoms under other conditions of living together.

As a particular observation, we may mention that in due course the Canadian camp authorities gave the prisoners the opportunity to take walks of several hours duration outside the camp, accompanied by single unarmed guards. At first the interest in these walks was very keen. Gradually it subsided, however, to such an extent that eventually the walks could be discontinued altogether. This circumstance seemed to confirm the observation that people can gradually so accustom themselves to restriction of spatial liberty that the possibility of greater freedom of movement no longer holds great attraction, so long as full liberty is denied. As a parallel phenomenon may be cited the fact that many persons, of their own accord, do not for many years of their lives leave their home location, the confines of which are not greater than those of a prisoner-of-war camp.

From repeated conversations with the prisoners we concluded that only very few were conscious of limitation of liberty so far as their mental life was concerned, and only in isolated cases was this felt as unjust.

In addition to the foregoing observations relative to our main topic of study, many interesting psychological reactions were noted, as are naturally conspicuous in a prisoner-of-war camp; but similar reactions could also be observed under other conditions involving no spatial restriction of liberty.

Thus, the educational influence of a uniform discipline, with isolation from all opposing influences, proved to be extraordinarily strong in promoting among the prisoners uniformity of political and world outlook. It was also striking that rumors of the most unlikely kind arose with great frequency and were credulously accepted, presumably in consequence of deprivation of outside news.

Interruptions of tobacco rations and mail deliveries led to more pronounced states of depression and irritability than any other factors.

The effects of special meteorological conditions upon psychic activities under conditions such as here discussed the author proposes to deal with in another communication.

REVIEW OF PSYCHIATRIC PROGRESS 1947

HEREDITY AND EUGENICS

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The steadily growing attention given to the problems of human genetics throughout neuropsychiatry found its most easily measurable reflection in a considerably increased output of synoptic and didactic material published during the past year. The most salient publications dealing with genetic topics in relation to public health, mental hygiene, and social medicine included the rather voluminous textbook of human genetics by Gates (1); the less pretentious but excellent monograph of Muller, Little, and Snyder(2), "Genetics, Medicine, and Man"; the compendious and very timely work of Crew(3), "Genetics in Relation to Clinical Medicine"; and the highly technical books on "Mathematical Genetics" by Hogben(4) and on "Animal Genetics and Medicine" by Grüneberg(5). The more elementary textbooks of Colin(6) and Snyder(7) appeared in new editions, while a recently completed textbook of "Genetics" by Altenberg(8) was announced ready for original publication. In addition, a scholarly treatise by Dunn and Dobzhansky(9) on "Heredity, Race, and Society" was brought out in a pocket-book edition of the Penguin series, and a new textbook of abnormal psychology by Page(10) was offered with the explicitly stated emphasis on "the importance of genetic and constitutional factors in the etiology of certain disorders." All these books seemed certain to obtain a definite place in the reading lists of medical students and psychiatric field-workers expected to be familiar with the fundamentals of medical genetics, with the possible exception of Gates' two volumes, which might be considered mandatory mainly as a reference book and bibliographic guide for research workers.

Other gaps in the literature on medical genetics were commendably filled by the appearance of several new journals. Two prominent geneticists, Crew and Hogben, who had long been leaders in the promotion of the public health aspects of human heredity, became the first editors of the British Journal of Social Medicine, published by the British Medical Association. Another team selected from the aristocracy of British geneticists, Darlington and Fischer, joined in the editorship of a new journal, "Heredity," to be published triannually by Oliver and Boyd. A quarterly under the editorship of Mayr, "Evolution," promised to bring together contributions from all fields of biology regarding evolutionary phenomena. The Journal of Gerontology, with Moore as the senior editor, was designated to the same purpose with respect to aging.

In the first issues of the last periodical it was especially Benjamin(11) who stressed the important part played by heredity in the variance of biological age and general health. The universal need for an extension of basic health education and biological research to all problems of human personality development and "social physiology" including senescence was effectively described by Crew (12) in a series of articles and addresses, and by Snyder(13) in his Hermann M. Biggs Memorial lecture on medical genetics and public health. Equally authoritative comments were made by Carling, Grant, Strömgren, and many other speakers at the symposia on social surveys, social medicine in the curriculum, and care of the aged, which were organized by the sections of psychiatry and social medicine at the recently re-inaugurated International Conference of Physicians (14) in London.

Another symposium of the section of psychiatry at this conference was devoted to a discussion of genetics in relation to mental disorders(15), with Sjögren, Kallmann, Roberts, Slater, and Penrose as the invited speakers. A report on the prevalence of severe mental deviations in isolated population groups was made by Sjögren, while a general review of the genetic data presented at the meeting was assigned to Penrose. The genetic aspects of mental deficiency were discussed by Roberts, those of psychopathic personality by Slater, and those of the major psychoses by the reviewer. Evidence of multifactor inheritance was presented by Rob-

erts for the group of high-grade defectives, considered by him the tail end of the normal distribution curve of intelligence and clearly distinguishable from low-grade defectives with an I. Q. lower than 45 due to a damaged brain (single genes or external factors interfering grossly with development). Similar evidence was offered by Slater for the greater part of variance in temperamental traits and psychopathic personality deviations (defined as abnormal personalities who suffer under their abnormality or cause society to do so), and by the reviewer for variations in constitutional resistance to the development or continuance of a schizophrenic psychosis assumed by him to be the result of a specific psychosomatic dysfunction produced by a single-recessive gene.

The pronounced variability in the clinical expressivity of the schizophrenic genotype was interpreted by the reviewer as an indication that the disorder, although based on a specific hereditary predisposition, could be both prevented and cured, most effectively "by a duplication of the biological defense reactions of a strong constitution protecting a carrier of the schizophrenic genotype from developing any or a progressive psychosis." In agreement with some recent observations made by Dobzhansky and Montagu(16) in relation to the "genetically controlled plasticity of mental traits," the reviewer emphasized that both the ability to be mentally adjusted and the ability to react with a true psychosis should be viewed as unique expressions of the attainment of human status in the evolutionary development of man's mental equipment and cultural organization (equally dependent upon the bondage of organic inheritance).

In an earlier symposium on failures in psychiatric therapy which was held by the American Psychopathological Association in New York, the reviewer(17) presented a more detailed account of the active part that should be assigned to a purposeful management of genetically controlled phenomena in the treatment of "inherited" mental disorders. In accordance with the old truism that no inherited disorder should be regarded as incurable merely because of the hereditary nature of its origin, the contingencies of inheritability and curability were shown to be virtually unrelated with respect to symptomatic therapy. A causally directed treatment of an inherited disorder was claimed to be possible either by modifying the biochemical dysfunction established as the primary effect of the underlying main gene, or by changing its expression through methodical stimulation of secondary modifiers and, under certain circumstances, through careful management of vital environmental factors.

The remarkable progress made in experimental approaches to the central problem of mutation was demonstrated by Auerbach and her collaborators(18) in a report on their discovery that chemical substances such as mustard gas are able to produce gene mutations and chromosome rearrangements very similar to those obtained by radiation. Interesting differences between the mutagenic properties of radiation and chemical reaction were found in regard to the frequency of translocations produced and to the extent of expression of the genetic changes in the offspring (possibly due to the different amounts of energy involved in the two types of reaction). The authors formulated the theory, therefore, that "the gene affected by treatment does not always mutate at once, but may acquire a tendency to mutate which remains latent until a later cell division." They also suggested that, by its very nature, a natural mutagen can have no drastic effect in the species in which it occurs (since the species could not survive), and that a physiological system which includes mutagens whose production is controlled by genes will, in the course of its evolution, have attained a finely attuned equilibrium between the strength of the effective substances and the sensitivity of the genes on which they act. Removed from its normal genotypical environment, a natural mutagen may produce quite different effects or none at all. It may even be possible that one of the means by which evolution adapts mutability to environmental requirements is the achievement of a balance between the production of mutagens and sensitivity to them.

The politically corrupted doctrines and, at best, ideologically motivated myths of Lysenko's "new school of genetics," founded on the claim that adaptation to environment is the key to the understanding of all biological

variation, were dramatically exposed by Hudson and Richens(19), Darlington(20), and Dobzhansky(21). Serene homage was paid by all of them to the memory of the previous director of the Genetics Institute of the Academy of Sciences of USSR, N. I. Vavilow, a true pioneer and martyr of modern psychological genetics. His sacrificial death in 1942, following internment in a Saratov concentration camp and punitive transportation to Siberia, was finally ascertained through unimpeachable documents. Another irreparable loss was sustained by the science of genetics through the untimely death of Ellsworth Huntington, who had been working on a second volume of his latest contribution to the understanding of the interaction between biological inheritance and cultural influences in human personality development, "Mainsprings of Civilization." It was deplored by everyone that "Pace of History" was still unfinished when on October 17, 1947, the pen was taken out of the hands of this tireless and courageous worker.

Casuistically valuable reports were made by Helweg-Larsen and Ludvigsen(22) in relation to a simple dominant type of anhidrosis associated with neurolabyrinthitis (14 members of a Swedish family); by Falls(23) on retinoblastoma (5 of 9 siblings in one family and a concordant pair of monozygotic twins); by Rucker(24) on an apparently recessive sex-linked form of nystagmus (21 members of a family which consisted of 231 persons in 6 generations); by Hanhart(25) on a recessive type of microcephaly (10 cases in one family); and by Lindenov(26) on deaf-mutism (480 cases in 32 inbred families living on Danish islands.) Jéguier(27) described simultaneous occurrence of Huntington's chorea in a pair of identical twins; Rundles and Falls(28) recorded the observation of two families affected by a possibly sex-linked variety of hypochromic microcytic anemia; and Frazier(29) reported on the genealogy of 10 cases of phenylpyruvic oligophrenia (8 families). Snyder, Russel, and Graham(30) presented preliminary information suggestive of linkage between the genes for sickle cells and the M-N blood types, and Román-Goldzieher(31) found a pronounced tendency to mirror-handedness in a series of 283 twin pairs studied graphologically (73% of monozygotic sets).

The question as to the genetic or nongenetic causation of mongolism gave rise to a brisk controversy between Macklin and Snyder (32) on the one side and Benda(33) on the other, but was left in abeyance. Certain basic aspects of the interaction of nature and nurture in man were discussed by Haldane(34), and the potential merits of a weighting system for the estimation of gene frequencies from family records by Cotterman(35). The possible significance of genic influences was commented upon by Williams(36) in regard to alcoholism, and by Karpman(37) in regard to the "passive parasitic" type of idiopathic psychopathy. The helmsman of the experimental group of American geneticists, H. J. Muller, was honored by being awarded the Nobel Prize in medicine(38).

The important changes which took place in eugenic thinking during the past decade were outlined by Osborn(39), who returned to civilian life only to be recalled for special work for the American delegation to the United Nations organization. In a study of the social and biological background factors of alcoholism Popenoe(40) classified alcohol as a reasonably effective but expensive and wasteful instrument of natural selection in eliminating family stocks predisposed to mental illness. The need for discouraging reproduction of mentally defective persons was stressed by Halperin(41), despite the realization that "deviate groups will always be with us, irrespective of the severity of the selection." He found a very high degree of assortative mating in a painstaking analysis of data on the mental capacities of parents and offspring involved in 338 matings, but expressed no preference as to the type of eugenic procedure to be considered for this group. In a report of 200 cases of mental defect studied neuropathologically it was conceded by Benda(42), too, that "after deduction of all exogenous cases there still remains a very definite category which represents the endogenous type or the nucleus of the familial group."

The practical results obtained with selective sterilization of mentally defective populations were analyzed by Gamble(43) for the 24 American states which had such an active eugenic program of "protecting the mentally defective against an anticipated overload of offspring and the community

against the risk of increasing the number of defective children to be supported by public means," and by Butler and Gamble(44) for California and the Sonoma State Home. In 1945, the rate of sterilizations per 100,000 population was 1.7 for all the 24 states, and 7.1 for Delaware, the most active state. The total of 17,399 Californian patients, sterilized before release up to the end of 1944, included 69.7% of all patients released from the Sonoma institution before 1944, and 64% of those discharged during 1945. According to the authors' estimate, the eugenic program of this one institution saved California's taxpayers $650,000 annually by making possible the discharge of patients who could not have been discharged without sterilization.

BIBLIOGRAPHY

1. Human Genetics. Macmillan Company, New York, 1946.
2. Genetics, Medicine, and Man. Cornell University Press, Ithaca, New York, 1947.
3. Genetics in Relation to Clinical Medicine. Oliver & Boyd, Edinburgh, 1947.
4. An Introduction to Mathematical Genetics. W. W. Norton, New York, 1946.
5. Animal Genetics and Medicine. Paul Hoeber, London, 1947.
6. Elements of Genetics. Blakiston Co., Philadelphia, 1946 (2nd Edition).
7. The Principles of Heredity. D. C. Heath & Co., Boston, 1946 (3rd Edition).
8. Genetics. Constable & Co., London, 1947.
9. Heredity, Race and Society. Penguin Books, Inc., New York, 1946.
10. Abnormal Psychology. McGraw-Hill Book Co., New York and London, 1947.
11. J. Geront., **2**: 217.
12. Publ. Univ. of Edinburgh Graduates' Ass., 1945; also Lancet, **250**: 597; also Brit. Med. Bull., **4**: 166; also The Practitioner, London, **158**: 233.
13. Bull. N. Y. Acad. Med., **22**: 566.
14. Proceedings of the Intern. Conference of Physicians. London, 1947 (in press).
15. Lancet, **253**: 445.
16. Science, **105**: 587.
17. 1947 Sympos. on Failures in Psychiatric Therapy (edited by P. Hoch). Grune & Stratton, New York (in press).
18. Science, **105**: 243.
19. The New Genetics in the Soviet Union. Imp. Bur. Plant Breeding and Genetics, Cambridge, 1946.
20. J. Hered., **38**: 143.
21. Ibid., **38**: 227.
22. Acta Dermato-Venereologica, Stockh. **26**: 489; also Hospitalstidende, **31**: 2198.
23. J. Am. Med. Assoc., **133**: 171.
24. Am. J. Ophthal., **29**: 1534.
25. Arch. Julius Klaus-Stift., **18**: 632.
26. The Etiology of Deaf-Mutism with Special Reference to Heredity. Einar Munksgaard, Kopenhagen, 1945.
27. Arch. Julius Klaus-Stift., **20**: 77.
28. Am. J. Med. Sci., **211**: 641.
29. Am. J. Ment. Def., **51**: 577.
30. Science, **106**: 347.
31. Beih. Schweiz. Z. Psychol. Anwend., **6**: 29.
32. J. Hered., **38**: 83.
33. Mongolism and Cretinism. Grune & Stratton, New York, 1946.
34. Ann. Eugen., Camb., **13**: 197.
35. Contributions from the Laboratory of Vertebrate Biology, **33**: 1.
36. Quart. J. Stud. Alcohol, **7**: 567.
37. Psychoanal. Rev. 1947, **34**: 102, 198.
38. J. Hered., **37**: 325.
39. Eugen. News, **31**: 33.
40. Ibid., **31**: 35.
41. Am. J. Ment. Def., **51**: 153.
42. Ibid., **51**: 170.
43. Ibid., **51**: 164.
44. Ibid., **51**: 745.

NEUROPATHOLOGY, ENDOCRINOLOGY, AND BIOCHEMISTRY

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The organic aspects of shock therapy receive increasingly critical attention. There is a growing body of evidence that shock therapy should be used with considerable caution. Ferraro and co-workers(1) found that electrical currents similar in type, intensity, duration of current flow, and frequency to those used in human electric shock therapy may cause morphologic changes in the central nervous system of monkeys. Baruk(2) listed some of the serious sequelæ of electroshock both of a general and cerebral nature, immediate or supervening long after the conclusion of the treatment. All his laboratory animals subjected to insulin or convulsive shock, even though they appeared perfectly well for months or years after the experiments, died spontaneously following attacks of epilepsy, often in status epilepticus. Chatagnon(3) studied the course of the symp-

toms in 50 patients subjected to electroshock 1-5 years after the treatment. In half the cases the illness seemed to be developing as if no shock had been given. In the other half some showed new and unusual symptoms of dementia while others showed an accentuation of their symptoms. Salzman(4) gathered evidence to show that shock therapy increases the frequency of readmission, thus raising the question whether the time saved in hospital at the first admission is not lost in the frequency of subsequent admissions. The Rorschach of shock-treated cases frequently showed emotional constriction and characteristics of organic pathology. Gordon(5) stated that approximately 10% of his patients were peculiarly averse to submitting to electric shock treatment. These objectors are not helped by the treatment.

Winnicott(6) presented objections to shock therapy from a different point of view and registered 5 main reasons: 1. The author would not like to have it done to himself. 2. It attracts to psychiatry the wrong kind of doctors (those highly qualified for administering the shock therapies—well versed in the physical aspects of psychiatry but neglectful of and untrained in the psychological aspects). 3. It undermines the public's justification for relying on doctors to keep their scientific heads in face of the demand for "magic cures." 4. This type of therapy done in England leads to mass application of the same methods all over the world. 5. Physical methods of treatment constitute a tendency away from scientific psychology in psychiatry. Reitman(7) studied psychopathologic changes following leukotomy. Altered transference, financial and moral attitudes were interpreted as regressive changes while body image alterations, creative activity, and behavior changes were considered reintegrative phenomena. Of course, there are still many articles showing the clinical value of shock treatment.

The year has brought several thoughtful discussions of neurology in relation to psychiatry and general medical and surgical practice. Neurologists are endeavoring to define their proper position among medical specialists in the postwar world. Wilson and Ruff(8) stated that "approximately 51% of the patients confined in mental hospitals in the United States suffer with a form of psychosis directly attributable to disease of the nervous system or some other organ of the body." These authors deplore the trend of psychiatry away from a consideration of the anatomy, physiology, and pathology of the nervous system. In a discussion of this paper Nielson(8) said, "We believe that within another half century psychiatry will be well understood on the basis of neurology." Percival Bailey(9) suggested that neurologists leave most of the practice of psychiatry to psychiatrists and that neurology become more closely allied with its basic sciences and with neurosurgery. Pearce Bailey(10) estimated that at least one-third of the patients in general hospitals of the Veteran's Administration are neurologic problems.

Efforts toward more effective treatment of patients with spinal cord or peripheral nerve injuries are making progress. Kuhn(11) discussed the care and rehabilitation of 113 patients with injuries of the spinal cord and cauda equina. Munro(12) has been interested in the rehabilitation of patients totally paralyzed below the waist. He recommends the bilateral intraspinal division of the anterior roots of the eleventh thoracic through the first sacral spinal nerves to change a spastic to a flaccid hemiplegia as a preliminary to making the patients ambulatory. Scarff and Pool(13) found that massive involuntary spasms do not invariably follow transection of the spinal cord in man. When spasms occur, chronic irritation of the cord due to scarring of the distal stump appears to play an important rôle. The spasms are not determined alone by release of the cord from the influence of the brain. Relief from spasm has been obtained in varying degrees by removal of the scar or surgical section of the dorsal columns caudad to the lesion. In peripheral nerve injury Livingston(14) has collected evidence of active invasion of denervated areas by sensory fibers from neighboring nerves in man. Sunderland(15) found that, after suture in the proximal part of the limb, regenerating sensory fibers advance at a progressively diminishing rate, which in the beginning may be as great as 3 mm. per day. It gradually slows until it reaches a value of approximately 0.5 mm. a day over the terminal stages of recovery. For regeneration of motor fibers in the ter-

minal section of the ulnar nerve in the hand the rate was 0.6 mm. a day(16). Denny-Brown and Brenner(17) investigated the effects of lesser degrees of injury to peripheral nerves in order to determine the nature of structural change underlying the transient disturbance of function with such injuries. They found that a single percussion of a nerve trunk resulted primarily in damage to the myelin sheath and probable longitudinal rupture of the sheath of Schwann, with escape of damaged myelin into the endoneural spaces but without interruption of the axis-cylinder, even with severe blows.

There is evidence that the lesions in muscular dystrophy are not confined to striated muscle. Bevans(18) found myocardial lesions of varying severity in 4 patients with progressive muscular dystrophy who came to autopsy. One of the patients was in heart failure at the time of death and the other 3 showed disturbances of cardiac rhythm. The smooth muscle of the gastrointestinal tract showed edema, variation in size, atrophy and disappearance of the smooth muscle cells, and occasionally small areas of fibrosis. Gross lesions included marked dilatation of the stomach in 2 cases and perforation in one.

Forster *et al.*(19) found that fasciculations do not arise in the anterior horn cell since they are present for a time after denervation of the fasciculating muscle. Both fasciculations and fibrillations originate at the myoneural junction, the difference being that fasciculations are synchronized fibrillations occurring in the same motor unit.

Scheinker(20) studied histopathologic changes associated with human poliomyelitis. No part of the central nervous system entirely escapes damage. The medulla, pons, midbrain, hypothalamus, and cerebellum were involved to a great extent in every case. There was no direct correlation between the degenerative neuronal changes and the inflammatory reaction. The pronounced concentration of the inflammatory and degenerative reactions in the region of the vagal nuclei provides additional suggestive evidence of the possible spread of the virus from the intestine into the central nervous system by way of the vagus nerve.

Keegan(21) has established the clinical syndrome of lower cervical disc herniation as a fairly common cause of pain extending from the lower neck over the scapula and down the arm with numbness of one or more digits of the hand. Unilateral herniation of a cervical disc compresses only one nerve root and gives rise to detectable sensory and motor loss in the distribution of that root.

Walker(22) demonstrated 2 cases of radiculitis and myelopathy associated with chronic leptomeningeal thickening which resulted from the intrathecal administration of penicillin. Such reactions usually occur only when large amounts of penicillin are injected into the subarachnoid space.

Cramer(23) drained the cyst in 2 cases of syringobulbia and syringopontia. In both cases symptoms of advancing intracranial pressure were relieved. Kennedy and coworkers(24) reported 4 cases of disease of the cerebellopontine angle. Two cases were tumors and 2 inflammation. Inflammation in the angle caused rapid paralysis of motor nerves and tended to spare the sensory fibers, whereas the distortion of the nerve produced by tumors affected the sensory components earlier and more severely than the motor components. Bailey(25) showed that the pathologic changes in polioencephalitis hemorrhagica superior (Wernicke's disease) are confined to the periventricular gray matter of the midbrain and pons. These are focal areas of small capillary hemorrhages and of necrosis. Vascular disturbances include dilatation of the capillaries, capillary budding, and perivascular hemorrhage.

Malamud and Haymaker(26) studied 3 cases of brain injury in which the predominant involvement occurred in extrapyramidal nuclei of the brain. The localization of the lesions indicated that a syndrome resembling parkinsonism could be expected to develop on the basis of trauma. The pathoanatomic changes resembled those observed under conditions of experimental and other forms of cerebral anoxia. Titrud and Haymaker(27) studied sections of the nervous system of 2 cases of anoxic anoxia occurring in aviators. Death occurred in one case in 40 hours and in the other in 3 weeks. A conspicuous necrosis of nerve cells was observed in the third and sixth layers of the cerebral cortex. Other portions of the nervous system showed focal necrosis. The damage was strikingly similar to that observed in other forms of anoxia.

Gibbs and coauthors(28) used a dye injection method to measure the cerebral blood flow of man. The average resting flow for 7 subjects was 617 c.c. per minute. By hyperventilation it was possible to reduce the cerebral blood flow approximately one-half. By breathing 10% carbon dioxide, it was possible to double the cerebral blood flow. Ashby(29) propounded a theory which would account for mental dysfunction on the basis of an imbalance in the potentialities for metabolic activation caused by a disturbance in the quantitative incidence of essential enzymes.

Weil and Haymaker(30) found in 21 cases of scrub typhus that the distribution of the lesions in the central nervous system was more or less constant. Grossly the vessels of the leptomeninges and cerebrum were engorged, and there was a clouding and opacity of the leptomeninges which was most marked over the convex surface of the brain. Perivascular exudate was most severe in the periventricular region. Most of the reactive cells were large histiocytes. Focal accumulations of inflammatory cells were sparse. Boshers (31) stated that in malaria, which was a common disease in the American armed forces in the Mediterranean theater of operations, neuropsychiatric complications simulating meningitis, encephalitis, epilepsy, cerebral tumor, vascular lesions, and psychiatric disorders were encountered. Cerebral forms of malaria were not limited to the disease caused by P. falciparum, but P. vivax and mixed infections could produce these pictures. Marques(32) reported the unique case of a boy of 17 who presented a clinical picture of dystonia. There was mental deterioration but no amaurosis or ophthalmic change. At autopsy there were degenerative changes in the nerve cells resembling those found in amaurotic family idiocy.

Abbie(33) traced the evolutionary history of the diencephalon and pointed out that knowledge of the hypothalamus has made few advances in comparison with the thalamus. It has not been proved that emotions take origin in the thalamus. There is no evidence that the thalamus is a lower center held in constant check by cortical inhibition. However, the cerebral cortex may act in this capacity toward the hypothalamus. Ward and McCulloch(34) have demonstrated, by the method of physiological neurology, discrete projections from area 6-A in the frontal lobe of the cerebral cortex to nuclei in the hypothalamus. By strychninizing the cortex and recording the electrical activity of the brain stem of the monkey, McCulloch and co-workers(35) found a pathway which arises from cortical area 4-S and diverges from the cortico-spinal tract in the pons to reach the bulbar reticular formation. From its known physiological properties this is an extrapyramidal system mediating relaxation. Magoun and Hines(36) demonstrated a bulbar area capable of inhibiting motor activity whether initiated reflexly, in decerebrate rigidity, or from the motor cortex. It lies in the ventromedial part of the reticular formation and efferent connections descend from it to the ventral part of the cord.

There are relatively few papers dealing with endocrinology in relation to neurologic and psychiatric problems or with the chemistry of the nervous system. Cicardo(37) suggested that cortical excitation in an epileptic attack is determined by the release of potassium ions by the cortical neurons to depolarization of membranes, action currents, discharge of motor neurons and, finally, convulsions. Schmidt and Thannhauser(38) felt that the difficulties in the determination of higher nucleic acids in organs would be avoided if quantitative estimations could be based on phosphorus determinations rather than on color tests of their carbohydrate components. Stadie and co-workers (39) found that the aerobic synthesis of acetylcholine by slices or homogenates of rat brain is unaffected by exposure to oxygen at high pressure. Welch(40) presented a method for fractionation of the Alpha and Beta isomeric forms of lecithin and cephalin. In the brain the alpha forms predominate.

Moehlig(41) presented clinical evidence that the pituitary gland produces growth by the formation of mesodermal vascular structures and by supplying blood to the tissues. There is no need to assume the presence of specific hormones for growth since all endocrine glands would be affected by this mechanism. Hoagland and associates(42) found increased adrenal cortex secretion in healthy subjects under psychomotor stress contrasted to a failure of normal adrenal cortex function in mentally ill patients under

similar stress. Indices for adrenocortical secretion were the count of circulating lymphocytes and urinary ketosteroid output.

Karlan and Cohn(43) showed that the symptoms of dizziness and fatigue in soldiers were sometimes related to hypoglycemia. They studied 100 soldiers with these symptoms and found a low blood sugar in 9. The fatigue in these cases was not continuous but occurred at certain times. Hoefer *et al.* (44) reviewed 27 cases of verified islet cell adenoma of the pancreas. They divided the symptoms into 4 groups: autonomic visceral, somatic neurologic, psychomotor and fragmentary or full-blown seizures. Autonomic visceral symptoms were noted in 22 cases and consisted of lightheadedness, sweating, headache, and abdominal pain. Less frequent were nausea, vomiting, pallor, subjective coldness, ravenous hunger, precordial oppression, and palpitation. Braceland and coauthors(45) studied the delayed action of insulin in schizophrenia. Freeman(46) concluded that resistance to exogenous insulin is a phenomenon widespread throughout all types of mental disturbance. Barahal and Freeman(47) described a case of sudden graying of the hair, alopecia, and diabetes mellitus developing under circumstances of emotional tension.

BIBLIOGRAPHY

1. Ferraro, A., Roizin, L., and Helfand, M. Morphologic changes in the brain of monkeys following convulsions electrically induced. J. Neuropath. and Exp. Neurol., **5**: 285, 1946.

2. Baruk, H. Certain grave cerebral sequelae of electro-shock: Epileptic manifestations, dementias, late encephalitic reactions. Clinical and physiological data. Annales Medico-Psychologiques, **103**: 410, 1945.

3. Chatagnon, P. A. Action of electroshock on the clinical evolution of fifty cases of various psychopathies. Annales Medico-Psychologiques, **103**: 418, 1945.

4. Salzman, L. An evaluation of shock therapy. Am. J. Psychiat., **103**:669, 1947.

5. Gordon, H. L. Objectors to electric shock treatment are refractory to its therapy. N. Y. State J. Med., **46**: 407, 1946.

6. Winnicott, D. W. Physical therapy of mental disorder. Brit. Med. J., **4506**: 688, 1947.

7. Reitman, F. Observations on personality after leukotomy. J. Nerv. and Ment. Dis., **105**: 582, 1947.

8. Wilson, G., and Ruff, C. Present trends in the practice of neurology. J. A. M. A., **133**: 509, 1947.

9. Bailey, Percival. The practice of neurology in the United States of America. J. Ass. M. Coll., **21**: 281, 1946.

10. Bailey, Pearce. Program for the activation of neurology under the Veterans Administration. J. A. M. A., **184**: 1283, 1947.

11. Kuhn, W. G., Jr. The care and rehabilitation of patients with injuries of the spinal cord and cauda equina. J. Neurosurg., **4**: 40, 1947.

12. Munro, D. Rehabilitation of patients totally paralyzed below the waist with special reference to making them ambulatory and capable of earning their living. 1. Anterior rhizotomy for spastic paraplegia. New England J. Med., **233**: 453, 1945.

13. Scarff, J. E., and Pool, J. L. Factors causing massive spasm following transection of the cord in man. J. Neurosurg., **3**: 285, 1946.

14. Livingston, W. K. Evidence of active invasion of denervated areas by sensory fibers from neighboring nerves in man. J. Neurosurg., **4**:140, 1947.

15. Sunderland, S. Rate of regeneration of sensory nerve fibers. Arch. Neurol. and Psychiat., **58**: 1, 1947.

16. Sunderland, S. Rate of regeneration of motor fibers in the ulnar and sciatic nerves. Arch. Neurol. and Psychiat., **58**: 7, 1947.

17. Denny-Brown, D., and Brenner, C. The effect of percussion of nerve. J. Neurol., Neurosurg. and Psychiat., **7**: 76, 1944.

18. Bevans, M. Myocardial and gastro-intestinal changes in progressive muscular dystrophy. Arch. Path., **40**: 225, 1945.

19. Forster F. M., Borekowski, W. J., and Alpers, B. J. Effects of denervation on fasciculations in human muscle. Arch. Neurol. and Psychiat., **56**: 276, 1946.

20. Scheinker, M. Histopathologic changes associated with human poliomyelitis. Arch. Neurol. and Psychiat., **57**: 565, 1947.

21. Keegan, J. J. Dermatone hypalgesia with posterolateral herniation of lower cervical intervertebral disc. J. Neurosurg., **4**: 115, 1947.

22. Walker, A. E. Toxic effects of intrathecal administration of penicillin. Arch. Neurol. and Psychiat., **58**: 39, 1947.

23. Cramer, F. J. Surgical treatment of syringobulbia and syringopontia. Arch. Neurol. and Psychiat., **56**: 442, 1946.

24. Kennedy, F., Ross, I. A., and Galin, I. Problems of disease of the cerebellopontine angle. J. Nerv. and Ment. Dis., **105**: 149, 1947.

25. Bailey, F. W. Histopathology of polioencephalitis hemorrhagica superior (Wernicke's disease). Arch. Neurol. and Psychiat., **56**: 609, 1946.

26. Malamud, N., and Haymaker, W. Cranial trauma and extrapyramidal involvement: Cerebral changes simulating those of anoxia. J. Neuropath. and Exp. Neurol., **6**: 217, 1947.

27. Titrud, L. A., and Haymaker, W. Cerebral anoxia from high altitude asphyxiation. Arch. Neurol. and Psychiat., **57**: 397, 1947.

28. Gibbs, F. A., Maxwell, H., and Gibbs, E. L. Volume flow of blood through the human brain. Arch. Neurol. and Psychiat., **57**: 137, 1947.

29. Ashby, W. The pattern of enzyme distribution in the brain and mental function. J. Nerv. and Ment. Dis., **105**: 107, 1947.

30. Weil, A., and Haymaker, W. The distribution of the pathologic lesions of the central nervous system in scrub typhus. J. Neuropath. and Exp. Neurol., **5**: 271, 1946.

31. Boshers, B. Neuropsychiatric manifestations during the course of malaria. Arch. Neurol. and Psychiat., **58**: 14, 1947.

32. Marques, A. Dystonic form of amaurotic family idiocy. Arch. Neurol. and Psychiat., **58**: 46, 1947.

33. Abbie, A. A. Diencephalon. M. J. Australia, **2**: 421, 1939.

34. Ward, A. A., Jr., and McCulloch, W. S. The projection of the frontal lobe of the hypothalamus. J. Neurophysiol., **10**: 309, 1947.

35. McCulloch, W. S., Graf, C., and Magoun, H. W. A cortico-bulbo-reticular pathway from area 4-S. J. Physiol., **9**: 127, 1946.

36. Magoun, H. W., and Hines, R. An inhibitory mechanism in the bulbar reticular formation. J. Neurophysiol., **9**: 165, 1946.

37. Cicardo, V. H. Physiochemical mechanisms in experimental epilepsy. J. Nerv. and Ment. Dis., **101**: 527, 1945.

38. Schmidt, G., and Thannhauser, S. J. A method for the determination of desoxyribonucleic acid, ribonucleic acid and phosphoproteins in animal tissues. J. Biol. Chem., **161**: 83, 1945.

39. Stadie, W. C., Riggs, B. C., and Haugaard, N. Oxygen poisoning: VIII. The effect of pressure on enzymes. The system synthesizing acetylcholine. J. Biol. Chem., **161**: 189, 1945.

40. Welch, E. A. Fractionation of lecithins and cephalins. J. Biol. Chem., **161**: 65, 1945.

41. Moehlig, R. C. The production of growth by the action of the pituitary gland on the vascular and hemopoietic systems. Am. J. Roentgenol., **54**: 109, 1945.

42. Hoagland, H., Elmadjian, M. S., and Pincus, G. Stressful psychomotor performance and adrenal cortical function as indicated by the lymphocyte response. J. Clin. End., **6**: 301, 1946.

43. Karlan, C., and Cohn, C. Hypoglycemic fatigue. J. A. M. A., **130**: 553, 1946.

44. Hoefer, F. A., Guttman, S. A., and Sands, I. J. Convulsive states and coma in cases of islet cell adenoma of the pancreas. Am. J. Psychiat., **102**: 486, 1946.

45. Braceland, F. J., Meduna, L. J., and Vaichulis, J. A. Delayed action of insulin in schizophrenia. Am. J. Psychiat., **102**: 108, 1945.

46. Freeman, H. Resistance to insulin in mentally disturbed soldiers. Arch. Neur. and Psychiat., **56**: 74, 1946.

47. Barahal, H. S., and Freeman, N. Sudden graying of hair, alopecia and diabetes mellitus of psychogenic origin. Psychiat. Quart., **20**: 31, 1946.

ELECTROENCEPHALOGRAPHY

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The past year witnessed steady progress in all fields of electroencephalography: the development of more ingenious instruments; a more penetrating understanding of the genesis and dynamics of the electrical activity in epileptic disorders; a refinement of the methods of localization and "activation" of abnormal patterns. Insofar as psychiatric applications are concerned, cautious advances have been made in 4 directions: (1) contributions to the disclosure of somatic deficiencies in mental disorders; (2) aid in the recognition of developmental factors; (3) attempts to reveal the EEG correlates of functional stresses; and (4) appraisal or guidance of somatic therapies.

The formation of various EEG societies and the first international meeting of electroencephalographers in London intensified the exchange of information among EEG workers. Several reviews on EEG progress were published (17, 29, 38, 57, 63, 74, 107).

A cross section of specific contributions may be outlined under the following headings:

Technique

The spectrum obtained with the automatic frequency analyzer, although not replacing the primary tracing (109, 42), may indicate abnormal harmonic relationships (110) and provides a time-saving tool, particularly for the quantification of slight frequency shifts (12). Other devices (6, 42, 53, 80, 100) and manual procedures (12, 33, 64) were described in related studies. In an ingenious instrument (111), local EEG patterns control the illumination of limited areas of the screen of the cathode-ray tube; the topography of the EEG is thus visualized as a whole, the magnitude of the local potential being related to the brilliancy of the corresponding screen spot which flickers in synchrony with the brain waves.

A simplified encephalophone(18), a new portable EEG(112), and various electrode devices(14, 81, 85) were developed. A method of quantification for localizing EEG patterns was presented(2). The use of the contralateral ear(4, 9), nasal(4), and basal (49, 62) leads for localizing deep-seated lesions or detection of subcortical activity is again advocated; also ventricular encephalography(75).

General Problems

CO_2 and O_2 influences were reviewed(11, 12, 64) and submitted to further investigation(37, 106). Bilateral compression of carotid arteries rapidly induces delta activity (in 10 seconds in the majority of subjects, particularly those with mental disorders) (50, 92); unilateral resection of the superior sympathetic ganglion is acutely followed by ipsilateral slow activity(3); hyperventilation effect is enhanced by nitrate and nitroglycerine and also by erect position(31). Brain potentials correlate with various autonomic functions (palmar skin potential, heart rate)(23, 24, 51; see also 67). Thus EEG is depicted as a component in a regulatory brain mechanism, the other variables being chemical condition and circulation(22). The rôle of enzymes is particularly stressed in a provocative review(52).

Epilepsy

In strychnine-induced spinal epilepsy in cats two adjacent segments of the cord beat in phase even if separated by a complete transection(13). Localized "provoked" potentials in the central area follow the stimulation of peripheral nerves in patients with myoclonic epilepsy(25). "Sharp" waves are viewed as conducted and temporally dispersed disturbances originated by "spikes" which alone have a strictly localizing value (59). There are unusually pronounced energy peaks at precise harmonic frequencies in patients with typical petit mal(110). Duplication of "petit mal" EEG features by 3-per-second electrical stimulation of a very small area of the medial intralaminar region of the thalamus is revealed(61). Unconsciousness produced by thalamic stimulation is viewed as resulting from mechanisms different from those present in sleep-walking regulation (the latter of hypothalamic origin) (61, 98). Depression of electrical activity (or a period of unchanged brain wave pattern) at the onset of convulsion and preceding paroxysmal activity was found in some patients having epileptogenic lesions in the temporal lobes(60). The low incidence of paroxysmal activity and poor hyperventilation effect in convulsive disorders associated with brain tumors was stressed(56).

Substitution of wheat gluten for casein in the diet of dogs induces epilepsy with associated EEG abnormality(84). Epilepsy with reference to genetics is given further consideration(76). Psychic seizures are also reviewed(88).

Activation of "epileptic" pattern has been widely investigated. Unsatisfactory results with acetylcholine, cyanide, penicillin, tridione, and alcohol(65) and controversial findings with pitressin(10, 65, 117) are described. Insulin was also used(5, 21). Preference is given by some workers(21) to slow intravenous injection of metrazol, contributing to both localization of focal epileptogenic lesions and diagnosis of idiopathic epilepsy while others use a rapid method with anticonvulsive premedication(65; see also 119). Activation was produced by induced or natural sleep which, in addition, disclosed focal disturbances in the temporal lobes in psychomotor epilepsy(41). Hypnotics are also valuable in the examination of epileptic infants (7). Visual or emotional stimuli are "activating" when these factors play a major rôle in the inducement of seizures(39).

Anticonvulsant therapy in relation to EEG is discussed in several papers(93, 54). Persistence of abnormal patterns years after complete control of clinical seizures by sedation was explained by pharmacological interruption of the neuronal chain between the original pacemakers and the motor system, stimulation of which is essential for the seizure(54).

Repeated EEG examinations on nonactivated epileptics were found to increase the probability of correct diagnosis by only 5% (94); however, there is decisive advantage in repeating the EEG in the hours following a seizure of unknown origin(8). Persistence of the same pattern in normal controls over

a 5-year period is stressed(34). (See other papers on EEG in epilepsy, 1, 36, 89, including a general review, 58.)

Brain Tumors

Statistics on 600 brain tumor cases verified by operation or autopsy are reported; out of 247 hemisphere gliomas, correct EEG localizations or at least lateralizations were achieved in 80% of cases with only 3% false localizations(55). A better understanding of the localizing significance of different abnormal frequencies is emerging from various papers(59, 70, 73): slow irregular delta activity is associated with superficial lesions, whereas rhythmic quality suggests deep-seated disturbance; 2-3 per second activity correlates with the presence of lesions of the basal ganglia, thalamus, and cerebellar hemispheres, as do 4-6 per second waves with lesions in the hypothalamus, pons, and vermis(73).

Brain Injuries

Animal studies(43) show that EEG provides a good index of injury above a certain critical level(118); below this level histological changes occur without EEG disturbances. Posttraumatic EEG is discussed with reference to the nature of the injury(1, 96, 104), posttraumatic headache(16), convulsive disorders(66, 69), and serial examinations(72).

Acute Organic Diseases

EEG correlations with clinical features of encephalitis were studied on 240 patients (40). Postencephalitic convulsions correlate highly with abnormal EEG sequelæ. Cerebral involvement of poliomyelitis is revealed by EEG in a great proportion of patients (44; see also EEG in acute arsenical encephalopathy, 35). EEG classification of comas is attempted(15).

Mental Disease

These major findings in encephalitis of different origin may contribute to the understanding of the somatic background of certain mental disorders. Indeed, sequelæ of severe acute diseases (besides the hereditary factors, 68) have been traced in the EEG of behavior problem children and psychopaths(46, 47). Incidence of abnormality in psychopaths screened in a military setting is lower than generally reported(99) while it is high in mental patients and among criminals (see controversial studies, 30, 46, 47, 68, 87). Such findings stimulated the use of dilantin in problem children(108) and in neurotics with certain abnormal EEG features(45, 89). Associations between EEG abnormality and certain clinical types of psychopaths and compulsive neurotics is emphasized(95); also correlations between dependency and dominant alpha frequency(83) as well as between anxiety and exaggerated alpha depressibility under stimulation(78). Selective correlation between EEG abnormality and intellectual "efficiency" (none with vocabulary) in psychogenic disease was found(77).

Developmental factors are emphasized (78) in the appraisal of EEG in mental patients: equal incidence of abnormality in young psychopaths and schizophrenics; least abnormality (spontaneous or electrically induced, 116) and most pronounced alpha depressibility between 30 and 40 years of age; spatial predominance of anterior abnormality in young adults and adolescents and occipital "dysrhythmia" in "involutional age"(78); facilitation of photic driving with increased age(86). The latter is also facilitated at a fast or a slow rate when corresponding frequencies pre-exist in the record. Experimentally induced insomnia produces a shift of the EEG spectrum toward fast frequencies, explained by the effort to stay awake(105). EEG correlates of sleep disorder in manic-depressive patients are stressed (26, 78). Absence of sleep pattern in hypnotic states is confirmed(28).

Changes of the EEG after electric shock therapy confirm that unidirectional technique (82, 116) and brief stimulus therapy(79) are associated with a milder disturbance of the brain waves. No correlation was found between the postshock abnormality and clinical improvement, although in one report (116) longer hospitalization was associated with greater abnormality. Response of beta activity to sodium amytal is greatly reduced, particularly in the frontal area, after electric shock therapy(48). Repeated electric shock

in animals produces, first, increase of slow rhythm and then depression of all electrical activity(97).

High incidence of EEG changes after lobotomy is found in some series in which postlobotomy convulsions were also frequent (101). There is a remarkable EEG sensitivity in lobotomized patients to carotid compression along with signs of disturbance of autonomic nervous system(91, see also 113).

Review of EEG in psychosomatic disorders was presented(68). Several papers were devoted to the study of headache(16), particularly migraine(27), with emphasis on timing of the examination. The effect of quinacrine was described(32). Case reports on familial periodic paralysis(114), schistosomiasis of the brain(115), and an EEG study of Helen Keller(102) were published. Asymmetry in the parieto-occipital region was stressed in several reports(19, 20, 103).

BIBLIOGRAPHY

1. Abbott, J. A. J. Nerv. and Ment. Dis., **105**: 535, 1947.
2. Aird, R. B., and Bowditch, S. C. J. Neurosurg., **3**: 407, 1946.
3. Austin, G., Conley, T., and Worster, H. Presented at East. Ass. EEG Meet., October, 1947.
4. Bagchi, B. K., and Bassett, R. C. J. Neurosurg., **4**: 348, 1947.
5. Baisset, A., Bugnard, L., Grezes-Rueff, F. A., Grezes-Rueff, Ch., and Planques, J. Presented at Internat. Meet. EEG, London, 1947.
6. Barbour, I. Review of Scientific Instruments, **18**: 516, 1947.
7. Barnes, T. C., and Fischer, C. C. Arch. Pediat., **64**: 6, 1947.
8. Baudouin, A., Puech, P., Fischgold, H., and Brisac, C. Presented at Internat. Meet. EEG, London, 1947.
9. Bickford, R. G., and Giffin, M. E. Presented at Internat. Meet. EEG, London, 1947.
10. Blier, J., and Redlich, F. Arch. Neurol. and Psychiat., **57**: 211, 1947.
11. Brazier, M. A. B. Presented at East. Ass. EEG Meet., October, 1946.
12. Brazier, M. A. B. Presented at Internat. Meet. EEG, London, 1947.
13. Bremer, F. Presented at Internat. Meet. EEG, London, 1947.
14. Buffington, M. A., and Weil, A. A. Science, **105**: 185, 1947.
15. Bugnard, L., Fischgold, H., Delcambre, M. T., and Bounes, G. C. Presented at Internat. Meet. EEG, London, 1947.
16. Busse, E. Dis. Nerv. Sys., **8**: 299, 1947.
17. Busse, E., and Ebaugh, F. G. Am. Practitioner, **2**: 27, 1947.
18. Conrad, M., and Pacella, B. L. Science, **105**: 216, 1947.
19. Cornil, L., and Gastaut, H. La Presse Med., **37**: 421, 1947.
20. Cornil, L., Schachter, M., and Gastaut, H. Marseille-medical, **83**: 538, 1946.
21. Cure, C., Rasmussen, T., and Jasper, H. Arch. Neurol. and Psychiat., in press, 1947.
22. Darrow, C. W. Psychol. Rev., **54**: 157, 1947.
23. Darrow, C. W., and Henry, C. E. Federation Proceed., **6**: 93, 1947.
24. Darrow, C. W., Pathman, J., and Kronenberg, G. J. Exper. Psychol., **36**: 355, 1946.
25. Dawson, G. D. Presented at Internat. Meet. EEG, London, 1947.
26. Diaz-Guerrero, R., Gottlieb, J. S., and Knott, J. R. Psychosom. Med., **8**: 399, 1946.
27. Dow, D. J., and Whitty, C. W. M. Lancet, **253**: 52, 1947.
28. Dynes, J. B. Arch. Neurol. and Psychiat., **57**: 84, 1947.
29. Ebaugh, F. G., and Billings, E. G. Am. J.. Med. Sciences, **214**: 109, 1947.
30. Eickhoff, L. F. W., and Beevers, C. A. Am. J. Psychiat., **103**: 194, 1947.
31. Engel, G. L. Annals Intern. Med., in press, 1947.
32. Engel, G. L., Romano, J., and Ferris, E. B. Arch. Neurol. and Psychiat., **58**: 337, 1947.
33. Engel, G. L. Arch. Neurol. and Psychiat., **57**: 379, 1947.
34. Engel, G. L., Romano, J., and Ferris, E. B. Science, **105**: 600, 1947.
35. Engel, G. L., Romano, J., and Goldman, L. Arch. Neurol. and Psychiat., **56**: 659, 1946.
36. Fetterman, J. L., and Weil, A. A. Med. Clin. of N. Am., p. 1273, Sept., 1947.
37. Finesinger, J., Lindemann, E., Brazier, M. A. B., and Chapple, E. Am. J. Psychiat., **103**: 738, 1947.
38. Frey, T. EEG Study of Neuropsychiatric Disorders, Stockholm, 1946, Acta Psychiatrica et Neurologica Supplementum XLII.
39. Gastaut, H. Presented at Internat. Meet. EEG, London, 1947.
40. Gibbs, F. A., and Biggs, E. L. Arch. Neurol. and Psychiat., **58**: 184, 1947.
41. Gibbs, F. A., Gibbs, E. L., and Fuster, B. Presented at Annual Meet. Neurol. Ass., 1946.
42. Gibbs, F. A., and Grass, A. M. Science, **105**: 132, 1947.
43. Glaser, M. A., Sjaardema, H., and Woelfel, M. J. Neurophysiol., **9**: 63, 1946.
44. Goldbloom, A., Jasper, H., and Brickman, H. F. J. A. M. A., in press, 1947.
45. Goodwin, J. E. Am. J. Psychiat., **104**: 369, 1947.
46. Gottlieb, J. S., Ashby, M. C., and Knott, J. R. Arch. Neurol. and Psychiat., **56**: 381, 1946.
47. Gottlieb, J. S., Ashby, M. C., and Knott, J. R. Am. J. Psychiat., **103**: 823, 1947.
48. Gottlieb, J. S., Knott, J. R., and Kimble, L. L. Am. J. Psychiatry, in press.
49. Greenblatt, M., Funkenstein, D., Miller, D., and Rinkel, M. Am. J. Psychiat., **103**: 749, 1947.

50. Greenblatt, M., Rinkel, M., and Solomon, H. C. Presented at Am. Ass. EEG Meet., 1947.
51. Henry, C. E., and Darrow, C. W. Federation Proceed., **6**: 1, 1947.
52. Hoagland, H. J. Compar. and Physiol. Psychol., **40**: 107, 1947.
53. Hoefer, P. Presented at East. Ass. EEG Meet., December, 1946.
54. Hoefer, P., Hoff, H. H., and Pluvinage, R. I. L. Presented at Am. Neurol. Ass. Meet., 1947.
55. Hoefer, P., Schlesinger, E. B., and Pennes, H. H. Monograph Ass. Research Nerv. and Ment. Dis., 1947.
56. Hoefer, P., Schlesinger, E. B., and Pennes, H. H. Presented at Am. Neurol. Ass. Meet., 1946.
57. Hughes, J., Hammerman, S., and Russell, G. Progress in Neurol. and Psychiat., Grune and Stratton, New York, 1947.
58. Jasper, H. H., chapter in Epilepsy, Grune & Stratton, New York, 1947.
59. Jasper, H. H. Presented at Internat. Meet. EEG, London, 1947.
60. Jasper, H. H., and Daly, D. Presented at Am. EEG Ass. Meet., 1947.
61. Jasper, H. H., and Droogleever-Fortuyn, J. Ass. Research Nerv. and Ment. Dis. Monograph, 1947.
62. Jasper, H. H., Faure, J., and Henderson, L. Presented at Internat. EEG Meet., London, 1947.
63. Jasper, H. H., and Kershman, J. Progress in Neurol. and Psychiat., New York: Grune and Stratton, 1946.
64. Kaufman, I. C., and Hoagland, H. Arch. Neurol. and Psychiat., **56**: 207, 1946.
65. Kaufman, I. C., Marshall, C., and Walker, A. E. Arch. Neurol. and Psychiat., in press, 1947.
66. Kaufman, I. C., and Walker, A. E. J. Nerv. and Ment. Dis., in press, 1947.
67. Kennard, M. A., Psychosom. Med., **9**: 29, 1947.
68. Kennard, M. A. Diplomate, April, 1947.
69. Kibbe, M. H. New Eng. J. Med., **237**: 122, 1947.
70. Laufer, M. W. J. Nerv. and Ment. Dis., in press, 1947.
71. Laufer, M. W., and Perkins, R. F. J. Nerv. and Ment. Dis., **104**: 583, 1946.
72. Laufer, M. W., and Perkins, R. F. J. Nerv. and Ment. Dis., in press, 1947.
73. Lennox, M., and Brody, B. S. J. Nerv. and Ment. Dis., **104**: 237, 1946.
74. Lennox, M., and Lennox, W. G. Annual Rev. of Physiol., **9**: 507, 1947.
75. Lennox, M., and Ruch, T. C. J. Neurosurg., **3**: 219, 1946.
76. Lennox, W. G. Am. J. Psychiat., **103**: 457, 1947.
77. Liberson, W. T. Presented at Am. Psychiat. Ass. Meet., 1946.
78. Liberson, W. T. Presented at Internat. Meet. EEG, London, 1947.
79. Liberson, W. T. Am. J. Psychiat., in press.
80. Lowenbach, H., and Barbour, I. Federation Proceed., **5**: 1, 1946.
81. McIntyre, A. R., and Dunn, A. L. Arch. Neurol. and Psychiat., **46**: 676, 1946.
82. Moriarty, J., and Siemens, J. Arch. Neurol. and Psychiat., **57**: 712, 1947.
83. Moses, L. Psychosom. Med., **8**: 405, 1946.
84. Newell, G. W., Erickson, T. C., Gilson, W. E., and Elvehjen, C. A. Proceed. Soc. Exper. Biol. and Med., **65**: 115, 1947.
85. Nixon, D. L. Arch. Neurol. and Psychiat., **56**: 6, 1946.
86. Ostow, M. Presented at Am. Neurol. Ass. Meet., 1946.
87. Ostow, M., and Ostow, M. J. Nerv. Ment. Dis., **103**: 346, 1946.
88. Penfield, W. Brit. Med. J., Nov. 2, 1946.
89. Proctor, L. D. Am. J. Psychiat., **104**: 380, 1947.
90. Redlich, F. Dis. Nerv. Sys., **7**: 362, 1946.
91. Rinkel, M., Greenblatt, M., Coon, G. P., and Solomon, H. C. Arch. Neurol. and Psychiat., in press, 1947.
92. Rinkel, M., Greenblatt, M., Coon, G. P., and Solomon, H. C. Science, in press, 1947.
93. Robinson, L. J. J. Nerv. and Ment. Dis., **105**: 661, 1947.
94. Robinson, L. J. J. Nerv. and Ment. Dis., **104**: 486, 1946.
95. Rockwell, F. V., and Simons, D. J. Arch. Neurol. and Psychiat., **57**: 71, 1947.
96. Roseman, E. North Calif. Soc. Neurol. and Psychiat. Meet., 1947.
97. Rubinstein, H. S., and Kurland, A. A. Proceed. Soc. Exper. Biol. and Med., **65**: 348, 1947.
98. Schwab, R. S. Presented at Internat. Meet. EEG, London, 1947.
99. Simon, B., O'Leary, J., and Ryan, J. J. Arch. Neurol. and Psychiat., **56**: 677, 1946.
100. Sonnemann, H., and Kennard, M. A. Science, **105**: 437, 1947.
101. Stevens, H., and Mosovich, A. Am. J. Psychiat., **104**: 73, 1947.
102. Still, W. C., Arch. Neurol. and Psychiat., **57**: 629, 1947.
103. Sugar, O. Dis. Nerv. Sys., **8**: 141, 1947.
104. Troland, C. E., et al. J. Neurosurg., Sept., 1946.
105. Tyler, D. B., Goodman, J., and Rothman, T. Am. J. Physiol., **149**: 185, 1947.
106. van Harreveld, A. J. Neurophysiol., **10**: 361, 1947.
107. van der Horst, L. Psychiatrische en Neurologische Bladen, 1947. No. 1/2.
108. Walker, C. F., and Kirkpatrick, B. B. Am. J. Psychiat., **103**: 484, 1947.
109. Walter, W. G. Digest Neurol. and Psychiat., **15**: 4, 1947.
110. Walter, W. G. Ass. Research Nerv. and Ment. Dis. Monograph, in press, 1947.
111. Walter, W. G. Presented at Internat. Meet. EEG, London, 1947.
112. Walter, W. G., and Brooks, A. A. Electronic Engineering, July, 1947.

113. Ward, A. A., and McCulloch, W. S. J. Neurophysiol., **10**: 309, 1947.
114. Watson, C. W. Yale J. Biol. and Med., **19**: 127, 1946.
115. Watson, C. W., Murphey, F., and Little, S. C. Arch. Neurol. and Psychiat., **57**: 199, 1947.
116. Weil, A., and Brinegar, W. Arch. Neurol. and Psychiat., **57**: 719, 1947.
117. Wikler, A. Arch. Neurol. and Psychiat., **57**: 78, 1947.
118. Zimmerman, F. T., and Putnam, T. J. Arch. Neurol. and Psychiat., **57**: 521, 1947.
119. Ziskind, E., Bercel, N., and Friedman, R Ass. Research. Nerv. and Ment. Dis. Monograph, in press, 1947.

PSYCHOMETRICS

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In the area of projective test procedures, the publication by Tomkins(17) of his work book on the Thematic Apperception Test of H. A. Murray sets up a new landmark to progress. New and more rigorous methods of scoring and interpretation are presented together with a well-illustrated and cautious statement of the usefulness of the test as an adjunct to personality diagnosis and psychotherapy. Wyatt(23) offers a guide to the scoring and analysis of the TAT which is intended to reduce the time required for the evaluation of a protocol to the point where it becomes feasible to use the procedure frequently in the clinic.

Sisk(13) presents a case study illustrating the value of the combined use of the Rorschach and the Thematic Apperception procedures for confirming a tentative psychiatric diagnosis and for illuminating the psychodynamics in the case of an obsessive compulsive individual. Williams(22) publishes experimental confirmation of the validity of certain Rorschach signs as indices of intellectual control. His study deserves to be a model for further experimental investigations of the validity of Rorschach categories. Garfield(6) reports on the validity of blind Rorschach diagnostic interpretations in a series of 75 consecutive cases referred for Rorschach examination because they presented difficult diagnostic problems. The Rorschach diagnosis agreed with the final psychiatric diagnosis in 76% of the cases.

The time-honored sentence completion method of Ebbinghaus, first used in assaying intellectual level, appears to be adaptable for use as a method of personality appraisal. Stein(14), using a set of sentences developed in the personnel research of the Office of Strategic Services, reports that in a VA psychiatric clinic the method yields serviceable information supplementary to that provided by other projective procedures. Symonds (15) has published a preliminary validation study of the OSS sentences in which he relates test responses to clinical judgments in 6 cases from the OSS series. Rotter and Willerman(11) offer another form of the test and a guide for objective scoring.

Analysis of the deviations of Wechsler-Bellevue subtest scores from a subject's mean score or vocabulary score has come in recent years to be a widely used procedure in psychodiagnostic testing. A warning concerning a critical methodological error in the use of this procedure has been sounded by Foster(5), by Rabin(10), and by Thompson(16): only when the nosological groups used in establishing differential diagnostic scatter patterns are controlled for age can the differences in patterns be regarded as significant. Thompson points out that Rapaport's case material from which he derived his differential diagnostic scatter patterns was not controlled for age. By reworking a part of his data with age controlled, she demonstrates that some of his supposedly differentially diagnostic patterns are without statistical significance.

Terman and Merrill in their manual for the Revised Stanford-Binet express the view that any change in the order of presenting the test items from that given in the manual makes the norms of the test inapplicable. Yet it is often observed in clinical testing

that the procedure of giving the items in consecutive order from "easy" to "hard" levels of difficulty imposes such increasing frustrations upon the *maladjusted* subject that his performance is adversely affected. Hutt(7) presents imposing evidence that the view of Terman and Merrill is not tenable. He also describes a method of varying the standard order of presentation designated "adaptive testing," and presents evidence indicating that the method enables the maladjusted subject to obtain a better "maximum" rating, *i.e.,* one representing more the cognitive than the conative aspects of his present capacities.

The problems of the psychometric appraisal of the brain-injured are the subject of two unusually able papers. Armitage(2) has made an evaluative study of the diagnostic merits of a group of psychometric procedures currently being applied in the study of brain-injured adults. He also presents a screening test for use with cases of suspected brain injury. Meyer and Simmel(9) consider the psychological examination of children with various neurological disorders. They support well the view that the psychological examination can be optimally useful for differential diagnosis as well as for prognosis and therapy only when the prevailing quantitative, end-product test methods are supplemented by an orientation and procedures which yield qualitative and descriptive information concerning the processes underlying the test achievements. Allen(1) reports that the most consistent Wechsler-Bellevue scatter patterns in young brain-injured adults are obtained when deviations are calculated from information rather than from vocabulary scores.

The problem of the diagnosis and prognosis of the "feebleminded" is brought again into the area of the controversial by Schmidt's(12) arresting monograph on changes in personal, social, and intellectual behavior of children originally classified as feebleminded. Here is a carefully planned and executed study the results of which are in sharp contrast to conventional professional opinion. Schmidt investigated the nature and extent of changes in behavior, in 254 twelve- to fourteen-year-old children originally classified as feebleminded, during and after participation in a school environment planned to decrease nervous tensions, to remove emotional blockings, to further social interaction, and to develop self-confidence and a sense of personal worth. The period of the experimentally-controlled school milieu comprised 3 years, the follow-up period 5 years. "By the end of the study, the average adjustment of the total experimental group was equal to that of the average adult, both according to standardized measures and their academic, vocational, and social activities." The mean over-all change in Binet IQ for the entire group was 40 IQ points.

Wells(18, 19, 20, 21) in a series of 10 case studies of superior young male adults deals critically with the widely and often uncritically-applied "trait" verbalist. He also illustrates its origins and functions in a variety of personality structures.

Consistent with increasingly widespread use of the Wechsler-Bellevue Scale is the publication of more and more papers on its clinical possibilities and limitations. Besides those reported above, there should be mentioned Brecher's paper(4) on the value of W-B diagnostic signs for schizophrenia, Boehm and Sarason's(3) on Wechsler's index of intellectual deterioration, and Kriegman and Hansen's(8) on a shortened form of the test.

BIBLIOGRAPHY

1. Allen, R. M. The test performance of the brain injured. J. Clin. Psychol., **3**: 225, 1947.

2. Armitage, S. G. An analysis of certain psychological tests used for the evaluation of brain injury. Psychol. Mono., **60**: No. 1, 1947.

3. Boehm, Alice E., and Sarason, S. B. Does Wechsler's formula distinguish intellectual deterioration from mental deficiency? J. Abn. & Soc. Psychol., **42**: 356, 1947.

4. Brecher, Sylvia. The value of diagnostic signs for schizophrenia on the Wechsler-Bellevue adult intelligence test. Psychiat. Quart. Suppl., **20**: 58, 1946.

5. Foster, A. Age and the Wechsler-Bellevue scattergraph. J. Clin. Psychol., **3**: 396, 1947.

6. Garfield, S. L. The Rorschach test in clinical diagnosis. J. Clin. Psychol., **3**: 375, 1947.

7. Hutt, M. L. "Consecutive" and "adaptive" testing with the revised Stanford-Binet. J. Consult. Psychol., **11**: 93, 1947.

8. Kriegman, G., and Hansen, F. W. VIBS: a short form of the Wechsler-Bellevue Intelligence Scale. J. Clin. Psychol., **3**: 209, 1947.

9. Meyer, Edith, and Simmel, Marianne. The psychological appraisal of children with neurological defects. J. Abn. & Soc. Psychol., **42**: 193, 1947.

10. Rabin, A. I. Vocabulary and efficiency levels as functions of age in the Babcock method. J. Consult. Psychol., **11**: 207, 1947.

11. Rotter, J. B., and Willerman, B. The incomplete sentences test. J. Consult. Psychol., **11**: 43, 1947.

12. Schmidt, Bernadine G. Changes in personal, social, and intellectual behavior of children originally classified as feebleminded. Psychol. Mono., **60**: No. 5, 1946.

13. Sisk, H. L. A clinical case study utilizing the Rorschach and the Murray Thematic Apperception Test. J. Clin. Psychol., **3**: 293, 1947.

14. Stein, M. I. The use of a sentence completion test for the diagnosis of personality. J. Clin. Psychol., **3**: 47, 1947.

15. Symonds, P. M. The sentence completion test as a projective technique. J. Abn. & Soc. Psychol., **42**: 320, 1947.

16. Thompson, Clara W. Review of Rapaport's Diagnostic Psychological Testing. Vol. I. J. Genet. Psychol., **69**: 123, 1946.

17. Tomkins, S. S. The Thematic Apperception Test. New York: Grune & Stratton, 1947.

18. Wells, F. L. Verbal excess over quantitation: two case studies. J. Psychol., **23**: 65, 1947.

19. ———. Verbal facility, sensitive affect, psychometrics: two "palimpsest personalities." J. Psychol., **23**: 179, 1947.

20. ———. Inarticulate, without physical science motivations: case studies V and VI. J. Psychol., **24**: 149, 1947.

21. ———. Physical science motivations, inarticulate: case studies VII-X. J. Psychol., **24**: 211, 1947.

22. Williams, M. An experimental study of intellectual control under stress and associated Rorschach factors. J. Consult. Psychol., **11**: 21, 1947.

23. Wyatt, F. The scoring and the analysis of the Thematic Apperception Test. J. Psychol., **24**: 210, 1947.

MENTAL HYGIENE IN EDUCATION

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Recognition of the importance of mental hygiene in education has increased greatly in the past few years. A decade ago there was only occasional mention in educational literature, and a national teacher education report dismissed the subject in a footnote as not of sufficient significance to be listed with other courses of instruction in teacher-training institutions. Today hardly an educational statement is issued that does not emphasize mental hygiene. One of the major resolutions adopted this past year by the Association for Childhood Education as part of its action program called attention to "the mental tensions, uncertainties, fears, and lowered vitality" of many children today and the consequent need for child health services and sympathetic understanding of the individual child in school; another stressed the development of "worthy human relations" as a world-wide necessity growing out of the experiences of early childhood. A Milwaukee public schools curriculum bulletin issued in 1947 puts first on the list of needs to be met in building good citizens "physical and mental health that will make for happy, useful living and wholesome, well-integrated personalities." It urges that the basic emotional satisfactions be met by affection, security or freedom from fear, and success through enriching experiences in school. The New York Mental Hygiene Project, now in its fourth year, has based its efforts on the belief that mental hygiene is essential if society is to provide "good education for all children." Current school journals are presenting materials on mental hygiene in nearly every issue. The Journal of the National Education Association, for example, has been running a series on human growth and development with emphasis on mental health.

That schools generally have not yet shown to any great extent the effect of the mental hygiene movement is obvious, however. The idea is widely acclaimed; the practice lags behind. Recent studies have continued to indicate the serious need of better mental health attitudes in school. An Ohio study covering 1,500 children in the sixth grades of 3 city schools found 12% of the children seriously maladjusted and another 30% poorly adjusted. In a study of teachers in one of the better American city school systems Dr. Bruce B. Robinson discovered numerous instances of what he termed "neurotic and normal discourtesy in the classroom," and

urged the necessity of getting rid of both. He associated neurotic discourtesy with show of anger toward a child, calling names, making derogatory remarks, giving commands in an uncultured manner. The neurotic discourtesy he regarded as a symptom of serious personality defect on the part of teachers who indulged in it. The late James S. Plant, head of the Essex County (New Jersey) Juvenile Clinic, in his last published statement expressed amazement that more attention was not being given to healthful living—particularly mental health in the child's 10 years in the classroom, with the "hours of quiet study, hours of patterning to the curriculum instead of to one's spontaneous interest in learning; hours of shackled frustration in the face of overwhelming competition and failure."

One interesting experiment in bringing better mental health into the classroom is the Delaware Human Relations class, at Wilmington, Delaware, in which 7th and 8th grade school children discuss problems of human relations and personality. This experiment has been going on for a number of years, and those in charge say they are encouraged by the results. Most of the current efforts in schools, however, are directed at getting changes made in the whole emotional climate of the school, in the attitude of teachers and administrators, in better understanding of child growth and development, and in getting those in charge of the schools to examine critically certain traditional practices of the school—marks, grades, promotions, "recitations," "discipline," supervision—that became established before much was known of modern mental hygiene. Within the past 2 years the National Committee for Mental Hygiene has worked out several versions of a "Platform for Mental Hygiene in Education" as seen by psychiatrists, psychologists, educators, and others. The main points in the platform have had to do with the better selection and training of teachers; a good type of administration; "healthful" schools that are happy, attractive places; democratic methods; integrated student life; curriculum based on current and prospective needs; discipline as the product of "good total schooling rather than fear or force."

Better selection of teachers and better teacher education are stressed in all the recent recommendations. It is doubtful if much progress has been made in selection, from the point of view of mental health. This is due partly to teacher shortage, but also to slowness in devising valid techniques for testing personality as related to teaching. Distinctly more encouraging is the progress in teacher education, though here again it is doubtful whether actual practice comes anywhere near the accepted theories. It is still too early to measure the effects of the Commission on Teacher Education of the American Council on Education, but the work of this commission, which closed its 6-year program in 1944, has been carried forward vigorously by the American Association of Teachers Colleges, the National Education Association, and other organizations. There seems to be no doubt that one of the commission's publications in particular—the report compiled by Dr. Daniel Prescott and his group on "Helping Teachers Understand Children"—is already exerting considerable influence on both preservice and inservice education of teachers. The major points in the Prescott report seem to have been widely accepted: that "behavior is caused"; that "unacceptable behavior can be changed, and that desirable and effective action can be evoked"; that teachers who understand children "reject no one as hopeless or unworthy"; that each child is unique; that all children go through a series of "developmental tasks" that must be understood by those who work with them in school and other educational enterprises; and that teachers need to know the scientific facts that describe and explain the forces regulating human growth, development, motivation, learning, and behavior. Along with the widely publicized materials in this Prescott report has come a greatly increased publication of books and pamphlets that now put in the hands of teachers and those preparing teachers much information in usable form that has not hitherto been available except to specialists.

GENERAL CLINICAL PSYCHIATRY, PSYCHOSOMATIC MEDICINE, PSYCHOTHERAPY, GROUP THERAPY, AND PSYCHOSURGERY

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The various divisions of the vast field included in psychiatry are developing so rapidly and so much is being thought and written about them that it is becoming increasingly difficult for either psychiatrists in private work or those devoting their time to the hospital and research procedures to keep informed of the details of current trends in theory and practice.

It is hoped that the following brief comments and references to the literature will be of some aid to those concerned. It is obviously impossible, within a modest amount of space, to refer to all the worthful articles and books that have appeared during the past year. Moreover, some of them present rather limited interests and are oriented in the direction of a special focus commanding the attention of a very few workers. The references selected for this section represent a number of the present-day activities and applications of specialized knowledge in clinical psychiatry. It is thought that they are particularly well worth reading in the original.

The depersonalization syndrome is discussed by Stockings(1) who differentiates an ordinary feeling of unreality found in various psychiatric conditions and a true derealization-depersonalization syndrome which is a distinctive condition appearing frequently in psychiatric practice. It may be acute or gradual in onset and is characterized by 4 main symptoms, namely, a disturbance in the reality principle, disorder in affectivity, thought disturbance, and cephalic paresthesia. Electroanoxia seems to be the treatment indicated although the prognosis is generally favorable anyway. The dynamics, the differential diagnosis, and the clinical expressions of depersonalization have also been worked into an interesting presentation of theory and stimulating ideas by Galdston(2).

Durham(3) and co-workers studied the relation of mental imagery to hallucinations in 40 cooperative schizophrenics and in 10 other patients who had recovered from an alcoholic psychosis. The so-called "concrete imagery" test of Griffitt was utilized, and many controls were included. The findings seem to disprove the generally accepted theory that auditory hallucinations are exaggerations of predominating auditory imagery, since these workers found that one of the factors on which these hallucinations apparently depended was a low auditory imagery, *i.e.*, those patients projecting conflicts as auditory hallucinations tended to be deficient in auditory imagery. Will(4) has presented a comprehensive review of various types of hallucinations with emphasis on diagnosis and symptomatic significance. Some special features of hallucinations encountered by this author during his studies of schizophrenia in naval personnel are mentioned.

A critical review of the literature bearing on the etiology of dementia precox, appearing during the years from 1935-45, was made by Bellak and Wilson(5). It will be found useful for many purposes but particularly for research and teaching. However, the concept of schizophrenia as outlined by these authors shares the characteristics of all similar attempts, namely the groping for answers that will require many years of research to furnish. The dynamics of schizophrenia have also been discussed by Sillman(6) who presents a theory of normal thinking processes and how they are modified in the mental disorder. The value of an early correct differential diagnosis is stressed by Polatin and Hoch(7) since it indicates and determines the proper therapeutic procedures and affords prognostic evaluations. The finer differential points between neuroses and schizophrenic processes are discussed and malignant features are brought into the foreground. Experience has shown that those psychiatrists who pay attention to these particular differential features (usually not presented in textbooks) are much less liable to miss the early diagnosis of schizophrenia.

Prados and Ruddick(8) have outlined the manifestations of some emotional difficulties, particularly those of depressive and anxiety states frequently suffered by middle-aged men as the result of the approaching attenuation in sexual functions. These reactions occur in individuals having no previous his-

tory of psychopathological difficulties. There is a physiological background of pituitary-gonadal relationship and a psychological component which combine to determine the pattern of human behavior to a considerable extent during middle age.

In a study of depressive reactions in a general hospital Ripley(9) found that, of 150 patients, 100 suffered from a variety of physical diseases as well as from the emotional disorder. Sleep disturbances, excessive variations in the pulse rate, constipation, poor appetite, weight loss, and diminished sexual desire were characteristic components of the reactive depressions. Many had suffered from emotional difficulties over many years. Women predominated in the series. There was no apparent correlation between the type of physical illness and the depression.

A long-needed study on unsuccessful suicidal attempts was reported by Teicher(10). The subjects, 30 in number, were men in a military organization. No psychotic persons were included. The precipitating situations varied a great deal, but of course all were in a state of emotional upheaval for one reason or another. The choice of methods of attempting suicide by this group is interesting, being sometimes curious and frequently quite dramatic and exhibitionistic.

From time to time articles on the tendency of certain mental patients to swallow foreign bodies have appeared in the psychiatric literature of all countries. A study by Neustatter(11) made in a military hospital has been reported this year. The histories of these patients were compared with those having other types of reactions. Contrasts were noted between the different classes of "swallowers," and the effects of solitary confinement on the different groups are of particular psychiatric interest.

Some important observations on abnormally large birth weights of psychiatric patients were published by Barry(12).

"Psychosomatic" medicine is a very popular subject for study. It is so prominent now and ever expanding that one might designate the present as the beginning of the "Psychosomatic Era." Biologically oriented psychiatrists have always known about it, but its present general recognition is beneficial to all concerned. Psychic factors in the etiology and therapy of obesity have been presented by Freed(13). He points out that overweight has the effect of not only shortening the life span but also of enhancing the development of degenerative diseases. Apparently the psychologic factors in the picture are of more importance than the endocrine ones, as it is the tendency to overeat because of the drives for oral gratification. Details of dietary matters and of psychological support are discussed.

Regarding ulcerative colitis Groen's(14) contribution should be mentioned. Although this author's approach was not psychoanalytic his findings are similar to those of that school. He describes 6 cases of the disorder in which the onset or the recurrence was preceded by an emotional traumatic experience which had mobilized a specific deeply seated psychic conflict. Twelve characteristic traits are described as shared in common by patients having ulcerative colitis. An interesting case of peptic ulcer in identical twins was published by Riecker(15). This is said to be the fourth instance of its kind in current literature. Psychosomatic components in peptic ulcer have been pointed out many times in the literature of the past 10 years.

A study of 500 patients with migraine was made by Alvarez(16) who considers the disorder as a hereditary condition, aggravated by the emotional stresses of life. Headache, although a prominent feature, is only one of several other characteristics of the syndrome, which depends upon a special constitutional and personality organization. Asthma is the subject of a report of Swanton(17) who postulates that asthmatic attacks are precipitated by disorders of cerebral inhibition in certain persons bearing an asthma diathesis. These patients suffer from conflicts in that they are intelligent, nervous, irritable, aggressive, and dominating, and at the same time lack confidence, are sensitive and anxious. He explains how the asthma satisfies both sides of a parent-child conflict.

In a particularly informative paper Harrington(18) discusses the ocular manifestations of psychosomatic conditions. He describes such ocular vasomotor disturbances as amaurosis fugax, migraine, neurocircula-

tory asthenia, central and angiospastic retinopathy, glaucoma, and the ocular manifestations of hysteria. He emphasizes that aside from hysteria and some other neuroses many psychosomatic disorders are derived secondarily from a primary imbalance of the autonomic nervous system.

Cormia(19) has published a critical analysis of the psychosomatic factors in the dermatoses. The diagnostic methods of approach, the classifications of the conditions, and the general handling of psychosomatic skin conditions are well presented and can be used for teaching and orientation purposes. Kaywin(20) has analyzed the emotional factors in urticaria and Dangrove(21) has published an account of the psychosomatic aspects of dermatographia and pruritus.

Psychosomatic factors in the field of orthopedic surgery are delineated by Le Vay(22) who points out three main types of orthopedic situations: (1) patients requiring orthopedic treatment only, (2) those needing both orthopedic care and psychiatric help, and (3) those in which the orthopedic complaint is a mask for a serious emotional disorder requiring active mental therapy. Hypertonicity due to anxiety may cause a fibrositis in course of time.

Weiss(23) has made a psychosomatic study of rheumatism. It concerns itself with the psychopathological situation rather than with tissue pathology. This special study deals with 40 patients, all but 5 of whom were women. Severe physical disorders were absent although constitutionally there were hypoglycemia, low blood pressure, anemia, and avitaminosis. There were chronic resentment, discontent, and unconscious components among other psychological features, which were expressed in the form of chronic muscular tension. Psychotherapeutic suggestions are given. This same well-known contributor to psychosomatic medicine also published recently an important article dealing with allergic disorders(24). A study by Edmonds(25) presented a number of characteristics of nonarticular rheumatism.

Some serious physical diseases have been studied, or at least reported, psychosomatically during the year. Ebaugh and Hockstra(26) reported on the psychosomatic relationships in acute anterior poliomyelitis, Coleman(27) and co-workers on psychiatric care of tuberculous patients, Youngman(28) on the psychologic aspects of the early diagnosis of cancer, and Solomon(29) on the psychiatric aspects of cancer.

Kupper(30) has emphasized some aspects of the dream life in psychosomatic diseases, a subject that deserves a most thorough investigation in the future, as herein may lie diagnostic signs and aids of outstanding value, and Grinker(31) has contributed an excellent account of brief psychotherapy as applied in psychosomatic problems.

Haase(32) has made a search for, and a delineation of, certain active principles that seem to be similar in all forms of modern psychotherapy in spite of the fact that this type of therapy is characterized by contrasted theories and working procedures. However, they all attempt to bring the patient's problems into the right perspective and to aid him toward emotional maturity. The doctor-patient relationship is given considerable attention. Beginners in psychotherapy can read this article with profit. As to psychotherapy in schizophrenia, Federn(33) in his contribution points out the importance of an early diagnosis and the application of a special therapeutic procedure based on a psychoanalytic understanding of the ego and its functions. A comprehensive description of the technique is given in considerable detail differentiating it from the standard analytic method as usually applied to the psychoneuroses. Overholt(34) offers directions and suggestions to encourage the development of a supportive relationship between the patient and physician in situations where the schizophrenia patient is living outside a hospital environment. The various mental characteristics of the schizophrenic are reviewed and the attitudes of the physician that make for some success are described.

A very recent comprehensive book entitled "Teaching Psychotherapeutic Medicine," composed of lectures and discussions by a number of well-known authorities, has been published by the Commonwealth Fund, New York. It should be useful to beginners in psychotherapy and to general physicians, for whom the text is intended.

Among contributions to the subject of

group therapy, the instructions by Slavson(35) regarding the desirable qualifications and training of group therapists are informative and timely, and Simon(36) and co-workers have discussed group therapy from the viewpoint of the patient. They include several aspects of group therapy procedures and indications and results from the reports of the 141 persons, most of whom were psychoneurotics, which showed that 82% felt they had been benefited particularly in the gaining of insight and in improving their social relationships. Since group therapy is essentially an application of the principles and practice of individual therapy to several patients simultaneously, Sarlin and Berezin(37) reviewed some of the fundamentals that apply to all forms of psychotherapy. Recorded details of a series of group sessions are presented showing how the patients discuss problems pertaining to themselves and others in the group.

Psychosurgery is now being performed for various mental disorders throughout this and several other countries. Brain operations in this field are becoming extremely fashionable, despite the fact that many experienced psychiatrists are not in sympathy with the procedure on the basis that the evidence of favorable results is not particularly convincing and does not justify as yet the widespread indiscriminate application of such radical therapy. Therefore everyone concerned is eager to glean information from any literature available on the subject.

A report on 1,000 cases of leucotomy by the British Board of Control (The Lancet, 1947, I, 265) gives an idea of what has happened to a relatively large number of patients following the operation. It covers a number of county, borough, and private mental institutions in England and Wales where studies and therapy have been done. McKenzie and Proctor(38) have reported the results of their work in Canada; McLardy and co-workers(39) have given an account of neuroanatomic aspects; and Watts and Freeman(40) have published results of psychosurgery for the relief of severe pain.

Lobotomy was performed on 4 women patients over 60 years of age according to the report of Myerson and Myerson(41). These patients were suffering from chronic depression and obsessive-compulsive reactions in which there was marked anxiety. Mental illness had been resistant to electric shock therapy. In all cases there was a notable improvement in both objective and subjective spheres; an improvement that had been retained for at least a year at the time of the report. Some contraindications for frontal lobe operation are emphasized by Hutton(42), who states that although, as a result of this operation, many patients are sufficiently recovered to participate in a fairly satisfactory social and family life and others are freed from emotional tensions, anxieties, and aggressive, destructive impulses so that they can have a more comfortable existence in a hospital, there are some types that are made worse. The author mentions some indications and suggestions to be followed in selecting patients for this operation, pointing out that the basic character and total personality traits are of more importance in selecting patients than the type of mental disorder from which they are suffering. This may seem to be a little complicated in the light of the current general belief that the type of personality constellation or pattern determines the variety of mental disorder developed.

Hutton(43) has written also about the personality changes following prefrontal leucotomy. Personality traits were studied in 10 patients. The prominent postoperative changes noted were a definite diminution of self consciousness, a decrease in the awareness of the feelings of others, tactlessness, rudeness, emotional deterioration, and a lack of tendency to make new friends. There were less shyness, reserve, and anxiety, and a considerable reconstruction of activity. The intelligence did not seem to be affected, and there was no increase in antisocial or immoral behavior. Reitman(44) studied 50 female schizophrenic patients in whom he was able to distinguish two general types of psychological changes after leucotomy. One was regressive in nature, the other reintegrative. Three conclusions were reached: (1) psychopathologic changes after leucotomy may be regressive with reintegration on a simpler level; (2) the changes can be interpreted in cognitive rather than in affective terms; and (3) the operation is still an experimental method of treatment.

The same investigator(45) found that in some cases this operation activates a creative period of typical schizophrenic art which seems to represent an abreaction of psychopathological factors that are unconscious to the patient. This article contains a comprehensive description of the type of art productions characteristic of the schizophrenic patient. Two illustrative cases are cited, both patients having been subjected to the low orbital type of prefrontal operation. This operation releases usually the triad of symptoms, namely, euphoria, extroversion, and hyperactivity. Stevens and Mosovich(46) made a follow-up study of 30 patients who had had prefrontal lobotomy. They utilized clinical and electroencephalographic methods, and Peters(47) carried out a psychological investigation aimed at predicting the outcome by means of existing prelobotomy personality traits. These and numerous other studies done and at present under way should eventually furnish the much desired and needed enlightenment concerning the actual values to be expected from psychosurgery.

BIBLIOGRAPHY

1. Stockings, G. T. Depersonalization syndrome. J. Ment. Sci., **93**: 63, 1947.
2. Galdston, I. On the etiology of depersonalization. J. N. & Ment. Dis., **105**: 25, 1947.
3. Durham, P. H., et al. Relation of mental imagery to hallucinations. Arch. Neurol. & Psychiat., **57**: 469, 1947.
4. Will, O. A. A consideration of the significance of hallucinations. U. S. Naval Med. Bull., **47**: 622, 1947.
5. Bellak, L., and Wilson, E. On the etiology of dementia precox: A partial review of the literature from 1935 to 1945 and an attempt at conceptualization. J. Nerv. & Ment. Dis., **105**: 1, 1947.
6. Sillman, L. R.: The dynamics of schizophrenia. J. Nerv. & Ment. Dis., **105**: 61, 1947.
7. Polatin, P., and Hoch, P. Diagnostic evaluation of early schizophrenia. J. Nerv. & Ment. Dis., **105**: 222, 1947.
8. Prados, M., and Ruddick, B. Depressions and anxiety states of the middle aged man: Psychosomatic interpretation. Psychiat. Quart., **21**: 410, 1947.
9. Ripley, H. S. Depressive reactions in a general hospital. J. N. & Ment. Dis., **105**: 607, 1947.
10. Teicher, J. D. A study of attempted suicide. J. N. & Ment. Dis., **105**: 283, 1947.
11. Neustatter, W. L. The swallowing of foreign bodies. Brit. Med. Jour., **1**: 332, 1947.
12. Barry, H. Abnormally large birth weights of psychiatric patients. Arch. Neurol. & Psychiat., **57**: 98, 1947.
13. Freed, S. C. Psychic factors in the development and treatment of obesity. J. A. M. A., **133**: 369, 1947.
14. Groen, J. Psychogenesis and psychotherapy of ulcerative colitis. Psychosomatic Med., **9**: 151, 1947.
15. Riecker, H. H. Peptic ulcer in identical twins. Ann. Int. Med., **24**: 878, 1946.
16. Alvarez, W. C. The migrainous personality and constitution. Am. J. Med. Sci., **213**: 1, 1947.
17. Swanton, C. Asthma and other psychophysical interrelations. Med. J. Australia, **1**: 138, 1947.
18. Harrington, D. O. Ocular manifestations of psychosomatic disorders. J. A. M. A., **133**: 669, 1947.
19. Cormia, F. E. Psychosomatic factors in dermatoses: Critical analysis of diagnostic methods of approach. Arch. Dermatol. & Syphilol., **55**: 601, 1947.
20. Kaywin, L. Emotional factors in urticaria. Psychosomatic Med., **9**: 131, 1947.
21. Dangrove, E. Psychosomatic aspects of dermatographia and pruritus. Psychosomatic Med., **9**: 58, 1947.
22. Le Vay, A. D. Psychosomatic approach to orthopedic surgery. Lancet, **1**: 125, 1947.
23. Weiss, E. Psychogenic rheumatism. Ann. Int. Med., **26**: 890, 1947.
24. Weiss, E. Psychosomatic aspects of allergic disorders. Bull. N. Y. Acad. Med., **23**: 604, 1947.
25. Edmonds, E. P. Psychosomatic non-articlar rheumatism. Ann. Rheumatic Dis., **6**: 36, 1947.
26. Ebaugh, F. G., and Hockstra, C. S. Psychosomatic relations in acute anterior poliomyelitis. Am. J. Med. Sci., **213**: 115, 1947.
27. Coleman, J. V., et al. Psychiatric care of tuberculous patients. J. A. M. A., **135**: 699, 1947.
28. Youngman, N. V. Psychologic aspects of early diagnosis of cancer. Med. Jour. Australia, **1**: 581, 1947.
29. Solomon, H. C. Psychiatric implications of cancer. Rocky Mountain Med. Jour., **44**: 801, 1947.
30. Kupper, H. I. Some aspects of the dream in psychosomatic disease. Psychosomatic Med., **9**: 310, 1947.
31. Grinker, R. R. Brief psychotherapy in psychosomatic problems. Psychosomatic Med., **9**: 98, 1947.
32. Haase, E. An inventory of the common factors in the methods of modern psychotherapy. Dis. of the Nerv. Sys., **8**: 307, 1947.
33. Federn, P. Principles of psychotherapy in latent schizophrenia. Am. J. Psychother., **1**: 129, 1947.
34. Overholt, L. C. Psychotherapy in ambulatory schizophrenia. Dis. Nerv. Sys., **8**: 289, 1947.
35. Slavson, S. R. Qualifications and training of group therapists. Ment. Hygiene, **31**: 386, 1947.
36. Simon, B., et al. Group therapy from the viewpoint of the patient. J. N. & Ment. Dis., **105**: 156, 1947.
37. Sarlin, C. N., and Berezin, M. A. Group psychotherapy on a modified analytic basis. J. N. & Ment. Dis., **104**: 611, 1946.

38. McKenzie, K. G., and Proctor, L. D. Bilateral frontal lobe leucotomy in treatment of mental disease. Canad. Med. Assn. Jour., **55**: 433, 1946.

39. McLardy, T., et al. Prefrontal leucotomy: Neuroanatomic report. Brain, **70**: 18, 1947.

40. Watts, J. W., and Freeman, W. Psychosurgery for relief of unbearable pain. J. Int. Coll. Surg., **9**: 679, 1946.

41. Myerson, A., and Myerson, P. G. Prefrontal lobotomy in the chronic depressive states of old age. New Eng. J. Med., **237**: 511, 1947.

42. Hutton, E. L. Contra-indications for leukotomy: Whom not to leukotomize. J. Ment. Sci., **93**: 333, 1947.

43. Hutton, E. L. Personality changes after leukotomy. J. Ment. Sci., **93**: 31, 1947.

44. Reitman, F. Observations on personality changes after leukotomy. J. N. & Ment. Dis., **105**: 582, 1947.

45. Reitman, F. "Creative spell" of schizophrenics after leukotomy. J. Ment. Sci., **93**: 55, 1947.

46. Stevens, H., and Mosovich, A. Clinical and EEG investigations of prefrontal lobotomy patients. Am. J. Psychiat., **104**: 73, 1947.

47. Peters, H. N. Traits related to improved adjustment of psychotics after lobotomy. Abnorm. & Soc. Psychol., **42**: 383, 1947.

NEUROSYPHILIS

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The results of an additional year in the follow-up studies of penicillin-treated cases is the chief contribution to the subject of neurosyphilis during 1947. The evaluation of penicillin by prolonged observation of case material in the large centers where the treatment was first started is the most important contribution in a quarter of a century to therapy of the disease. The present status of opinion on the value of penicillin was recently summarized by Moore(1) as follows: "Clinically, in all types of neurosyphilis penicillin appears to be superior to any form of metal chemotherapy. Regardless of the type of neurosyphilis, clinical improvement may be expected to the extent to which symptoms and physical signs depend on inflammation rather than on degeneration. Neither penicillin nor any other form of treatment will restore dead brain cells or destroyed fiber tracts, though further destruction and clinical progress may be prevented.

"In certain relatively benign forms of neurosyphilis (asymptomatic, acute syphilitic meningitis, diffuse meningovascular neurosyphilis), penicillin alone gives satisfactory results. In the more serious parenchymatous forms (paresis, tabes dorsalis, primary optic atrophy, nerve deafness), the combination of penicillin and fever from induced tertian malaria simultaneously administered may be superior, both from clinical and laboratory standpoints, to penicillin alone."

This view that malaria therapy is advisable for the parenchymatous forms of the disease is not held by all writers in the field (see below).

The results of penicillin therapy as gauged by changes in the abnormalities of spinal fluid are strikingly similar in all clinics. One more year of follow-up adds encouragement, since no increasing tendency to relapse in the penicillin-treated cases has been reported. The spinal fluid results obtained at Johns Hopkins Hospital on 149 cases were summarized by Reynolds(2) as follows: "Improvement in the spinal fluid abnormalities generally was apparent. As a rule, the cell count and total proteins promptly became and remained normal. Colloidal mastic and Wassermann tests gradually improved, the improvement being well sustained. The degree and rapidity of improvement could not definitely be correlated with (a) the penicillin dosage; (b) the duration of symptoms; nor (c) the extent of spinal fluid abnormalities. More favorable results followed therapy with penicillin plus malaria than treatment with penicillin alone."

Koteen, Doty, Webster, and McDermott (3) reported their results of penicillin therapy in 111 patients with neurosyphilis at the New York Hospital. "Although some of the patients had previously received a variable amount of chemotherapy, virtually all presented cerebrospinal fluid changes characteristic of active disease at the time penicillin therapy was instituted." Their patients were classified as asymptomatic, 51; tabes dorsalis, 41; general paresis, 11; and others, 8.

All cases were treated with penicillin alone. All patients were given 4 million units in 14 days except during the first year of their investigation, when some cases with relatively inactive fluids were given 2 million units in 7 days. The spinal fluid results were in general similar to those outlined by Reynolds. No change in the clinical status of the asymptomatic cases was observed. Of the 11 paretics, 6 showed satisfactory results. Four of the others "were so deteriorated prior to the introduction of penicillin treatment that no improvement was anticipated. Two of these cases died shortly after completing the course of therapy." Their results in the 41 cases of tabes dorsalis were tabulated by symptoms and showed that a little more than half were benefited by the treatment. The most striking improvement was recorded in shooting pains, 17 of 24 cases benefited. These authors lay great stress on the spinal fluid changes and were so influenced by their results as to state in the discussion: "The efficacy of the treatment is sufficiently close to the efficacy of fever to justify a trial of penicillin as the sole antisyphilitic therapy for patients with asymptomatic neurosyphilis, tabes dorsalis and the various manifestations of meningovascular syphilis. It would also seem justified to follow the same procedure in paresis." It is surprising that they were willing to make such recommendations on so limited an experience with paresis.

Stokes, Steiger, and Gammon(4) analyzed their data from the University of Pennsylvania on 361 cases with neurosyphilis followed 90 days to 3 years; 321 had initially abnormal spinal fluids. These cases were classified as paresis, 35; taboparesis, 40; tabes dorsalis, 96; meningovascular, 64; congenital, 20; asymptomatic, 51; and others, 15. All cases were treated with penicillin alone. Some received "low dosage" schedules, 1.2 to less than 4.8 million units, and others were given "high dosage" schedules of 4.8 to 10 million plus units. Many interesting tables and a wealth of data were presented, showing grades and degrees of spinal fluid and clinical effects by diagnostic categories, penicillin dosage, periods of observations, etc. They also present an informative table of comparison of results with penicillin and those with malaria as reported by the Cooperative Clinical Group.

It is manifestly impossible for a review article to summarize these massive data. However, several quotations from the authors will show their enthusiasm and confidence. "Malaria in paresis is superior to penicillin alone in the clinical improvement produced when compared with *the first year or two of penicillin responses;* but penicillin rapidly overtakes malaria in the second and equals it in the third year of observation. . . . . It begins to look as if penicillin alone were the equal of malaria in paresis. Whether the combination or sequence of the two can improve on either alone, remains to be seen."

"In tabo-paresis the fluid improvement under penicillin definitely surpasses that obtained with malaria and the symptomatic improvement with penicillin is equal after the second year; in meningovascular neurosyphilis results are markedly superior serologically and equal clinically."

"In tabes one-third more good symptomatic improvements were obtained with penicillin in the second and third years than with malaria."

These authors also stress the possible therapeutic shock reactions which may occur by starting penicillin treatment with full doses and suggest that an opening dose of 500 units with gradual build-up to 40 to 80 thousand units per injection is safer.

Heyman(5) reported preliminary results at the Grady Hospital in Atlanta on 141 patients treated with penicillin alone. Approximately one-half of the cases received 4 million units. Most of the others were given 3 million or less. Several cases were given 6 million units. Seventy-seven patients were followed 6 to 8 months, 35 patients from 9 to 11, while the remaining 29 were followed for 12 to 19 months. The diagnosis of the cases were as follows: acute meningitis, 4; early asymptomatic, 19; late asymptomatic, 74; congenital asymptomatic, 5; meningovascular, 26; tabes dorsalis, 4; paresis, 7; and optic atrophy, 2. Spinal fluid results: 16 cases relapsed (11 of these received 3 million units or less); 16 cases had normal fluids; and the remaining 107 cases were recorded as showing satisfactory or improved fluids. The author compares the spinal fluid responses of 48 cases treated with 4 million units of penicillin with 48 cases (late neuro-

syphilis but types not stated) treated in the previous years with fever therapy induced by typhoid vaccine. Results were comparable. "It is extremely difficult to compare any two groups of patients with neurosyphilis in regard to the improvement in clinical symptoms, but it is our impression that the results of fever therapy were somewhat better than penicillin therapy in our patients with paresis. In asymptomatic neurosyphilis, however, or in patients in whom only an arrest in progress may be expected, penicillin definitely appears to be the treatment of choice." Because of the relatively small number of symptomatic cases and short period of follow-up, the author wisely does not stress clinical changes.

There are surprisingly little data in the literature on the subject of the optimum total dose of penicillin in late symptomatic neurosyphilis. It is probable that more time and a greater number of cases will be needed. All investigators began with arbitrary dosage schedules but, with experience and time, all have apparently gradually increased the amounts of penicillin per course. At the Boston Psychopathic Hospital where the material is largely made up of psychotic patients(6) the arbitrary penicillin course of 3 million units were doubled after one year. The majority of cases were given malaria as well as penicillin. If more treatment appeared indicated by spinal fluid and/or clinical status during follow-up, a second or third course of penicillin was administered. Of the cases treated with 3 million units, 36% required retreatment, clearly indicating that the original treatment was insufficient. Since the publication of these data, 115 patients with symptomatic neurosyphilis treated with 6 million units of penicillin and approximately the same amount of malaria have been followed a year or more(17). Of these, 15% required retreatment. Although the over-all clinical and spinal fluid results at one year or more are strikingly similar in the two groups, it is apparent that, when considered in the aggregate, 6 million units plus malaria is better than 3 million units plus malaria.

The pentavalent arsenical compound tryparsamide has been the subject of considerable controversy since its introduction into the treatment of neurosyphilis in 1923. This controversy has revolved about the fact that the drug is largely nonspirochetocidal, that it is of no value in any form of syphilis other than neurosyphilis, that it has a toxic affinity for the optic nerve, that its effects upon a given case cannot be anticipated, and that the reasons for its effectiveness or lack of effectiveness cannot be defined. In spite of these unknowns, tryparsamide has continued to be the drug of choice in many clinics and hospitals, especially those which treat general paresis, for the past 20 years. Now that penicillin has appeared and happily has proved to be useful and safe in the treatment of all forms of neurosyphilis, it is the opinion of a number of investigators that tryparsamide should be set aside. But, even though tryparsamide can now be replaced by penicillin in the treatment of general paresis and other forms of neurosyphilis, the article by Koteen(8) which appeared in the American Journal of Medical Sciences, May, 1947, and the statement which appeared in the Sept. 20, 1947, issue of the Journal of the American Medical Association in answer to a query should not go unchallenged. It is evident that the authors of each have had but little personal experience in the treatment of neurosyphilis prior to penicillin. From a review of the records of patients treated at the New York Hospital, Koteen finds little evidence to support tryparsamide. He lays stress upon pharmacologic studies which "show that pentavalent arsenicals, including tryparsamide, are not therapeutically effective until reduced to the trivalent form, ... " That is, pentavalent arsenicals do not destroy spirochetes until reduced to trivalent form. In the experience of many, the drug is "therapeutically effective" in a reasonable percentage of cases in spite of the "pharmacologic studies." Clinical experience showing that gummatous lesions, cardiovascular syphilis, etc., may develop while a patient is under treatment with tryparsamide argues that the pentavalent compound is not broken down in the body to trivalent form to any effective degree. Malaria is accepted as a useful method of treatment of neurosyphilis, especially general paresis, even though it is of little or no value in late syphilis outside of the nervous system. Indeed gummatous

lesions may appear within a matter of weeks following malaria. Neither the malarial parasites nor the elevation *per se* appear, therefore, to destroy spirochetes. No one seems to know the modus operandi of malaria therapy, yet no one seems to want to cast it aside because of this inadequate understanding or because of its dangers. Clinical experience and data on tryparsamide should not be discarded on basis of an inability to explain its action.

Ashby and Weickhardt (9) report interesting results from their studies on the distribution of the enzyme carbonic anhydrose in the cortices of 19 cases of paretic neurosyphilis. Although the writers of this review are not competent to judge this work critically, the fact that there was an apparent correlation between their results and the status of the neurosyphilis at time of death indicates its possible importance. Of the 19 cases, the 11 which showed "significant irregularities" in the distribution of the enzyme were the cases which had strongly positive spinal fluid abnormalities at death. The remaining 8 cases which did not show the irregularity in distribution of the enzyme had either negative spinal fluid or had shown substantial improvement before death. Apparently, activity of the syphilitic process in the cortex as reflected by the spinal fluid can also be measured by chemical techniques. This work also suggests that symptoms of paretic neurosyphilis might, in part, be due to enzyme or chemical alterations rather than to cell destruction entirely.

For several years those working in the field of neurosyphilis have been impressed with the apparent decreasing frequency of certain types of neurosyphilis—notably tabes dorsalis and the late forms of general paresis. It is of interest to have statistical data to support these clinical impressions. Malzberg (10) of the Bureau of Statistics, Department of Mental Hygiene, State of New York, made a careful analysis of the first admissions with general paresis to the mental hospitals in New York for the year ending March 31, 1945. During that year, 684 cases (a ratio of 4.9 per 100,000 population) were admitted with a diagnosis of general paresis. Tracing the trend, he showed that the rate of 9.1 per 100,000 population in 1918 decreased to 7.1 in 1927, increased to 7.7 in 1936, and has shown a steady decline each year since. The increasing rate in the 10 year period 1927-1936 is presumably a reflection of the spread of syphilis during the first World War. Although the present ratio of cases with neurosyphilis in mental hospitals is low, an increase in this rate may be expected within the next few years because of the spread of syphilis during the second World War.

BIBLIOGRAPHY

1. Moore, J. E. Penicillin in Syphilis: A 1947 Appraisal. To be published.

2. Reynolds, F. W. Penicillin in the treatment of neurosyphilis. IV. Cerebrospinal fluid changes in cases of symptomatic neurosyphilis. Annals Int. Med., **26**: 393, March 1947.

3. Koteen, H., Doty, E. J., Webster, W., and McDermott, W. Penicillin therapy in neurosyphilis. Am. J. Syph., Gon. and V. D., **31**: 1, January 1947.

4. Stokes, J. H., Steiger, H. P., and Gammon, G. D., with the collaboration of others. Three Years of Penicillin Alone in Neurosyphilis. Presented at the symposium, Recent Advances in Investigation of Venereal Diseases, held in Washington, D. C., on April 17, 1947, under auspices of Syphilis Study Section of The National Institute of Health.

5. Heyman, Albert. The treatment of syphilis of the central nervous system with penicillin. Am. J. Med. Sc., **213**: 661, June 1947.

6. Rose, A. S., and Solomon, H. C. Penicillin in the treatment of neurosyphilis. J. A. M. A., **133**: 5, Jan. 4, 1947.

7. Ibid. Unpublished data.

8. Koteen, Herbert. The present status of tryparsamide in syphilotherapy. Am. J. Med. Sc., **213**: 611, May 1947.

9. Ashby, Winifred, and Weickhardt, George D. Distribution of carbonic anhydrose in the pallium in 19 cases of paretic neurosyphilis. J. Nerv. and Ment. Dis., **106**: 107, August 1947.

10. Malzberg, Benjamin. A study of first admissions with general paresis to hospitals for mental disease in New York State, year ended March 31, 1945. Psychiat. Quart., **21**: 212, April 1947.

ALCOHOL. GERIATRICS

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Alcohol

During 1947, increasing efforts were made to focus the attention of the general public, civic authorities, and the medical profession on the problem of alcoholism. A model of investigation is the report of the New Hampshire Liquor Research Commission(1) which was concerned with the study of the effects of alcohol in the state, methods for treating and rehabilitating alcoholics, and a program of education to prevent alcoholism. The report of the activities of the Research Council on Problems of Alcohol(2) indicates the intense efforts made by this organization to establish integrated programs of research, teaching, and education. A conference on the medical, legal, and social approaches to the problem of inebriety and sponsored jointly by the Research Council and the New York Academy of Medicine(3) was held on January 8, 1947. During the year the National Committee for Education on Alcoholism encouraged many institutes on alcoholism, and these were held in various cities throughout the United States. A special series of radio broadcasts(4) entitled "You and Alcohol" was delivered examining the problem of alcoholic consumption in the United States and its effect upon people and institutions. This was ably done and constituted a well balanced symposium.

Jellinek(5) reported a careful and comprehensive survey on recent trends in alcoholic consumption and alcoholism stating that per capita consumption of alcoholic beverages rose steadily in the course of World War II, but remained below the levels of prepohibition years; that between 1940 and 1945 there was a 35% increase in the number of consumers but individual consumption hardly increased, if at all; that female alcoholism is by no means a "sign of the times," the female rate of chronic alcoholism being higher in 1918 (384 per 100,000) than in 1945 (242 per 100,000); that the rise of the female rate between the last prohibition years and 1945 was only 12.6% as compared with an increase of 43.6% in the male rate of chronic alcoholism; and that the entire increase in the rate of chronic alcoholism since 1930 has appeared in urban areas. Much of this was confirmed by Riley and Marden(6), who based their study on a sample of the adult population of the United States. They indicated that the proportion of Protestant abstainers (41%) is twice that of Catholics (21%) and three times that of Jews (13%), and emphasized, too, that the prevalence of drinking in the United States is becoming more urbanized, and related to this is the fact that small town culture is predominantly Protestant. The frequency of drinking among Jews, who have a low rate of problem drinking, adds support to the hypothesis that the incidence of alcoholism is not necessarily correlated with the prevalence of drinking within any cultural group.

No new theories about the etiology of problem drinking have been elaborated, but Roger J. Williams(7) feels that "a thorough study of individual people, particularly from the physiological and biochemical standpoints and the consideration of the hereditary factors which interplay with those of the environment, shows promise of revealing the answer to the problem of what is peculiar about an alcohol addict." This theory may be supported by the study of Brady and Westerfield(8), who utilized the autoselection technique developed by Richter. Rats fed a vitamin B deficient diet consumed relatively large amounts of alcohol voluntarily compared to control rats.

A detailed psychological study with the Rorschach was reported by Buhler and Lefever(9). A total of 100 chronic alcoholics were studied and compared with a "normal" group, a psychoneurotic group, a general psychopathic group, and a nonpsychotic organic group. The greatest difference was between the alcoholic and normal groups. There was a pattern of signs significant for the alcoholic of every clinical group, primarily the presence of significantly high anxiety and apprehension in conjunction with low tension tolerance. Floch(10) utilized the "Bowman-Jellinek" classification of abnormal drinkers

in differentiating a group of problem drinkers in the Detroit House of Correction.

Industry(11) is becoming more interested in the problem of the alcoholic since it is estimated that three million problem drinkers lose $432,000,000 annually in wages and cost the country $31,000,000 in medical and $25,000,000 in jail maintenance. Emphasizing the waste resulting from alcoholism, Jellinek(12) pointed out that employed problem drinkers lost on an average 22 working days a year, had 390,000 injuries through accidents, and accounted for 4,350 fatalities.

An interesting legal point was raised in a case before the Pennsylvania Superior Court (13) in which the beneficiary of an insurance policy, the wife of a chronic alcoholic, claimed payment. Physicians called as experts differed widely as to whether chronic alcoholism was a disease, a habit, or a self-inflicted injury. The court held there could be no recovery under the policy, stating "his drinking was intentional and since he could forecast the ensuing harm, it was wanton and self-inflicted."

Various methods continue to be advocated for the treatment of problem drinkers(14). Tiebout(15) in a stimulating paper emphasizes that the alcoholic must undergo certain experiences to produce in him the conscious need for help, and that the therapist, by appropriate attitudes, must help in inducing in the alcoholic a willingness and capacity to accept help, and that "the steps by which this capacity is attained are recognizable, logical, and inevitable. Every person must take these steps before he can accept his rôle as a patient." The psychological factors entering into the conditioned reflex treatment were reported by Lemere(16) and the results of treatment by Voegtlin(17). The usual annual report of a new cure of alcoholism was described in the Magazine Digest(18) and received editorial comment in the Journal of the American Medical Association(19) to the effect that "A simple cure for chronic alcoholism, seven day, seven week, or even seven year, does not exist." Reports of short-term hospitalization and treatment for the alcoholic and the results with such therapy are made by Davis(20) and Williams(21). Thimann and Peltason(22) described the use of subshock insulin therapy as a detoxicant in acute alcoholic intoxication and recommended insulin in doses of 10 to 20 units given simultaneously with dextrose as the method of choice in the treatment of the alcoholic psychoses, and subshock doses of insulin in uncomplicated cases of acute alcoholic intoxication.

BIBLIOGRAPHY

1. New Hampshire Liquor Research Commission Report. Quart. J. Stud. Alcohol, **8**: 143, June 1947.
2. Research Council on Problems of Alcohol Report. Quart. J. Stud. Alcohol, **8**: 176, June 1947.
3. Research Council on Problems of Alcohol and the New York Academy of Medicine Joint Conference. Quart. J. Stud. Alcohol, **8**: 296, Sept. 1947.
4. Columbia Broadcasting System, New York. You and Alcohol.
5. Jellinek, E. M. Recent trends in alcoholism and in alcohol consumption. Quart. J. Stud. Alcohol, **8**: 1, June 1947.
6. Riley, John W., Jr., and Marden, Charles F. The social pattern of alcoholic drinking. Quart. J. Stud. Alcohol, **8**: 265, Sept. 1947.
7. Williams, Roger J. The etiology of alcoholism: A working hypothesis involving the interplay of hereditary and environmental factors. Quart. J. Stud. Alcohol, **7**: 567, March 1947.
8. Brady, Roscoe A., and Westerfeld, W. W. The effect of B-complex vitamins on the voluntary consumption of alcohol by rats. Quart. J. Stud. Alcohol, **7**: 499, March 1947.
9. Buhler, Charlotte, and Lefever, D. Welty. A Rorschach study on the psychological characteristics of alcoholics. Quart. J. Stud. Alcohol, **8**: 197, Sept. 1947.
10. Floch, Maurice. Imprisoned abnormal drinkers: Application of the Bowman-Jellinek classification schedule to an institutional sample. Quart. J. Stud. Alcohol, **7**: 518, March 1947, and **8**: 61, June 1947.
11. Alcoholism: Problem for bosses. Kiplinger Magazine, 1 (No. 2) 1947, pp. 15 to 18.
12. Jellinek, E. M. What shall we do about alcoholism? Vital Speeches, **13**, 252, 1947.
13. Chronic Alcoholism as a Self-inflicted Injury (editorial). Medical Record, New York, **160**: 294, 1947.
14. Seliger, Robert V. Medical-psychological aspects of alcoholism. J. Clin. Psychopathol., **8**: 577, Jan. 1947.
15. Tiebout, Harry M. The problem of gaining cooperation from the alcoholic patient. Quart. J. Stud. Alcohol, **8**: 47, June 1947.
16. Lemere, Frederick. Psychological factors in the conditioned-reflex treatment of alcoholism. Quart. J. Stud. Alcohol, **8**: 261, Sept. 1947.
17. Philadelphia Psychiatric Society meeting held April 12, 1946. Arch. Neurol. and Psychiat., **57**: 513, April 1947.
18. Bruel, L., and Le Coq, R. Seven day cure for alcoholism. Magazine Digest, Oct. 1947, p. 22.

19. Seven Day Cure for Alcoholism (Editorial). J. A. M. A., **135**: 577, Nov. 1, 1947.

20. Davis, C. Nelson. Experience in short-term hospitalization of the alcoholic. Quart. J. Stud. Alcohol, **8**: 55, June 1947.

21. Williams, E. Y. The management of chronic alcoholism. Psychiat Quart., **21**: 190, April 1947.

22. Thimann, Joseph, and Peltason, Paul. Insulin subshock as a detoxicant in acute alcoholic intoxication. Quart. J. Stud. Alcohol, **7**: 506, March 1947.

Geriatrics

The two new journals in the field of gerontology which first appeared in 1946 continued during the past year. *Geriatrics,* published bimonthly, is the official journal of the American Geriatrics Society, and is "devoted to research and clinical study of the diseases and processes of the aged and aging." *The Journal of Gerontology* is published quarterly for the Gerontological Society. The American Geriatrics Society held its Fourth Annual Meeting June 5, 6, 7, 1947, at Atlantic City, New Jersey, and many topics of psychiatric interest were presented.

In all reports it is emphasized that we are becoming a nation of elders, that by 1980 it is estimated 50% of the population will be over 45 and 15% will be 65 years of age or older, and that this is due to three factors: the increase in average life expectancy from 51 years in 1919 to 65 years in 1945; a rapidly declining birth rate; and the decrease in immigration of lower age groups. Shock(1) discusses the problems of the oldster in our society, of finding economical methods for his care, the slowing-down of physiological processes in the aged, the arguments for and against the employment of older people, and suggests a program to utilize more adequately the potentialities of older workers for gainful employment. Dublin(2) re-emphasizes the marked shift in population from youth to older ages.

Klumpp(3) recommends that compulsory retirement on a calendar age basis be abandoned since physiological age is not synonymous with chronological age, and emphasizes that "old age is not a disease but the disabilities arising from it are," that institutions for the care of the aged be changed from "asylums" to modern treatment hospitals where the oldster may learn a job geared to his abilities. An interesting and simple method of estimating biologic (physiologic) age is suggested by Benjamin(4) who covers 19 factors in the life history and the results of examination postulating that biologic age is dependent on heredity and the general state of health as well as the functioning capacity of the individual.

The importance of the "nursing infirmary" and the "between hospital and home facility" and "private home" care for the aged is stressed by Kinnaman(5). Hinman(6) believes it is important to encourage some oldsters at the time of retirement to return to school to study and that others should occupy themselves in work which tests indicate they are capable of performing, and that ideal living arrangements be provided them where they may retain their individuality. The fate of elderly neurotics is discussed by Bergler(7), who insists that neurosis is a progressive and not a self-limiting disease—"the inner conscience of the elderly neurotic luring the ageing Ego into more dangerous escapades," and that the independently arising organic disease saturates the neurotic wish for punishment. Emotional problems of the elderly are described by Gitelson(8), who regards the psychological picture which old age presents as an overlapping of the waning powers of maturity and the increasing helplessness of the second childhood, the dulling of recent memory being psychologically a turning away from the painfulness of the present which is lacking the independent powers to maintain security, the tendency to more domineering attitudes being a compensatory reaction against feelings of inferiority and inadequacy, and depression being engendered by feelings of being left behind by life.

Psychometric studies with Wechsler-Bellevue scale are reported by Madonick and Solomon(9) in a group of 50 men and women aged 60 to 85, but the group is a rather selected one, many of them being former successful executives and professionals now in financial straits. Their I. Q.'s ranged between 85 and 140. Rorschach studies of 35 normal subjects from 50 to 80 years of age were done by Prados and Fried(10) and indicate that with increasing age impoverishment of the creative intellectual faculties took place, that these people reacted with anxiety to this, and that with

increasing age the individual's control over his instinctual demands tended to disappear.

Vernon and McKinlay(11) studied the effect of vitamins and methyl testosterone on a group of 84 male seniles and found that changes brought about by vitamins or hormones were small, inconsistent, and often negative. On the other hand, Prados and Ruddick(12) felt that hormonal treatment of middle-aged males suffering from depression and anxiety relieved the physical complaints with amelioration of many of the emotional manifestations. Convulsive shock therapy in geriatric problems characterized by depression is described by Wilbur and Fortes(13) and Gallinek(14) who indicate that convulsive therapy is well tolerated by the aged, and that organic defects and diseases common to old age are not necessarily contraindications to treatment.

The clinical differentiation of senile and arteriosclerotic psychoses is further elaborated by Rothschild(15).

The importance of further research in gerontological problems is emphasized by all(16, 18). Hoskins(16) recommends study at the molecular, cellular, organ-function, simple behavioral, psychological, and social levels as he did in the problems of schizophrenia. The paucity of work in geriatric problems in contrast to the increasing attention given child guidance is emphasized by Mackintosh(17). A recent development in research which may lead to fruitful results is the setting up of a Gerontology Study Section in the Research Grants Division of the National Institute of Health.

BIBLIOGRAPHY

1. Shock, N. W. Older people and their potentialities for gainful employment. J. Gerontol., **2**: 93, April 1947.

2. Dublin, Louis I. Problems of an aging population: Setting the stage. Am. J. Pub. Health, **37**: 152, February 1947.

3. Klumpp, Theodore G. Problems of an aging population: Care of the aged and chronically ill. A. J. Pub. Health, **37**: 152, February 1947.

4. Benjamin, Harry. Biologic versus chronologic age. J. Gerontol., **3**: 217, July 1947.

5. Kinnaman, Joseph H. Problems of an aging population: Sheltered care of the aged. Am. J. Pub. Health, **37**: 152, February 1947.

6. Hinman, Frank. The story of old age. J. Gerontol., **2**: 103, April 1947.

7. Bergler, Edmund. Elderly neurotics. Dis. Nerv. Syst., **8**: 35, February 1947.

8. Gitelson, Maxwell. Emotional problems of elderly people. The Proceedings of the Institute of Medicine of Chicago, **16**: 416, June 15, 1947.

9. Madonick, M. J., and Solomon, Marian. The Wechsler-Bellevue Scale in individuals past sixty. Geriat., **2**: 34, January 1947.

10. Prados, Miguel, and Fried, Edrita G. Personality structure in the older age groups. J. Clin. Psychol., **3**: 113, April 1947.

11. Vernon, P. E., and McKinlay, M. Effects of vitamin and hormone treatment on senile patients. J. Neurol., Neurosurg., and Psychiat, **9**: 87, July 1946.

12. Prados, M., and Ruddick, B. Depressions and anxiety states of the middle-aged man. Psychiat. Quart., **21**: 410, July 1947.

13. Wilbur, C. B., and Fortes, A. Convulsive shock therapy in patients over seventy years of age with affective disorders. Amer. J. Psychiat., **104**: 48, July 1947.

14. Gallinek, Alfred. Electric convulsive therapy in geriatrics. N. Y. State J. Med., **47**: 1233, June 1, 1947.

15. Rothschild, David. The clinical differentiation of senile and arteriosclerotic psychoses. Geriat., **2**: 155, May-June 1947.

16. Hoskins, Roy G. The problems of gerontology. Science, **105**: 590, June 6, 1947.

17. Mackintosh, J. M. Child guidance in old age. Lancet, **252**: 659, May 17, 1947.

18. Rothschild, David. The practical value of research in the psychoses of later life. Dis. Nerv. Syst., **8**: 123, April 1947.

EPILEPSY

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The principal new evidence in the field of epilepsy was compressed in December, 1946, into the joint meetings of the Association for Research in Nervous and Mental Disease and the International League Against Epilepsy.

Most fundamental is the effort to detect the point of origin of abnormal electrical discharges, and the physicochemical processes involved. Most characteristic of epilepsy is the alternate dart and dome formation of petit mal. Jasper, Penfield, and Droogleever-Fortuyn reproduced this pattern in the frontal cortex of cats by rhythmi-

cal 3-per-second stimulation of a small area in the medial intralaminar region of the thalamus. They thus demonstrate that this center is capable of synchronizing the spontaneous rhythmic activity of various semi-independent thalamo-cortical systems, and that the generalized dysrhythmia of petit mal epilepsy may originate locally. Penfield and Jasper further argue from clinical observations that the center responsible for unconsciousness, which represents the highest level of neuronal integration, must lie in a subcortical center equally accessible through anatomical connection with both hemispheres, and probably in the diencephalon or mesencephalon. But dart and dome electrical discharge patterns may be produced by chemical means. Chenoweth, Maynard, and St. John by injecting sodium fluoracetate in the blood or the cerebrum of dogs produced high voltage discharges, some of them indistinguishable from the petit mal seizures of patients.

But what of the chemistry of epileptogenic areas of the brain? Using micromethods, Pope and his co-workers in Montreal studied excised cortical tissue from epileptogenic areas of the brains, either of patients or of animals treated with alumina cream. The interstitial fluid pH of epileptogenic cortex relative to normal cortex in monkeys is not changed significantly. The histo-chemical indophenol-oxidase reaction, which is an indicator of the cytochrome-cytochrome oxidase system, is not altered in human epileptogenic cortical foci if proper correction is made for the reduction of the nerve cell population in such lesions. Comparative studies on cholinesterase in normal and epileptogenic regions of both humans and monkeys have demonstrated increased amounts of the enzyme in areas showing epileptiform electrical discharges, a most important finding.

Oxygen also is important in nerve cell activity. Davies and Rémond studied the oxygen tension and oxygen consumption of the cerebral cortex of the cat during metrazol-induced status epilepticus. The oxygen tension of the cortical tissues and of cortical venules declined without change in the oxygen tension of the arterioles. This decline followed an increase in the electrical activity of the cortex and reached a maximum by the end of the convulsion, after which it gradually returned to the initial level. Colfer by means of delicate microincineration and microcrystallography demonstrated that a redistribution of the electrolytes of the cerebral cortical neurones takes place during experimentally produced convulsions. There is a loss of potassium and an increase of sodium, the values returning to normal in 2 to 3 hours. The changes reflect neuronal activity and probably represent alterations in the permeability of the cell membrane. In vitro studies have shown similar and reversible changes with alteration in the pH. Spiegel and associates have long emphasized the rôle of cell permeability. They reported at these meetings that cerebral concussion of rats inhibits induced convulsions. Polarization measurements indicate that the blow causes transitory impairment of cellular surface membranes. As a result nucleic acids and enzymatic substances capable of splitting the nucleic acids and producing chromatolysis of anterior horn cells in vitro appear in the spinal fluid. These account for the postconvulsive decrease in convulsive reactivity. The long-debated subject of cerebral blood flow received further attention by Gibbs and Gibbs. Epileptic patients between seizures did not differ from control subjects in the minute volume of blood flowing through the brain.

To the many methods of inducing convulsions in animals can now be added the feeding of wheat glutin to puppies. Erickson, Gibson, and Newell recorded also the concomitant electroencephalographic discharges in puppies from 6 weeks to 4 months of age. The convulsant fraction is not affected by autoclaving the glutin for 6 hours.

With respect to the clinical application of electroencephalography to epilepsy, the following points were presented at the meeting. Abbott and Schwabb found that a normal tracing occurs most often in patients with few seizures and a good prognosis. However, many patients with a normal waking record have seizure discharges when they fall asleep (Gibbs and Gibbs). Abnormal patterns may be found in children without a history of epilepsy, but with behavior disorders (Kennard) or with a history of febrile convulsions (Margaret Lennox). In addition to overventilation and sleep, seizure dis-

charges may be induced by the intravenous injection of small amounts of metrazol. This has been found especially useful in the localization of epileptogenic foci both with the skull intact (Kaufman, Marshall, and Walker) and with the cortex exposed (Walker, Marshall, and Beresford). In a study of 66 twins affected by seizures, Lennox observed that the type of dysrhythmia as well as the type of the clinical seizure tended to be the same in epileptic co-twins.

As regards mentality, Collins tested 300 private patients. Average values for children were about normal, and for adults well above the usual normal range. Natural endowment and brain injury seemed of more importance than the epilepsy in matters of intelligence. Personality reaction patterns of children with idiopathic epilepsy were found by Kogan to be no different from a similar group of nonepileptic children attending a guidance clinic.

In the section of the program dealing with drug therapy, Merritt named a number of drugs that gave promise when their anticonvulsant action was tested in animals. For convulsive attacks, Kozol reported continued excellent results with methylphenylethyl hydantoin (mesantoin); and Fabing, Hawkins, and Gayle found diphenylene diimide (a drug not yet on the market) helpful in patients with convulsions. Davis and Lennox believed monthly blood examinations of patients taking tridione is effective in warning of dangerous neutropenia. An analogue of tridione, dimethylethyloxazolidine dione, had about the same clinical results as tridione, but gave fewer side effects.

In the field of pathology, Scheinker considered certain alterations of white matter to be important; Hoefer analyzed cases with brain tumor and seizures; and Watson, the incidence of epilepsy following the craniocerebral injuries of war.

Finally, in an attempt to aid in the social problems of the epileptic, the American Epilepsy League reported the results of a survey made of all Massachusetts physicians, asking how many epileptics had been treated in office or in clinics the past year. Inquiry was made also of all colleges and universities in the United States and Canada, asking conditions under which epileptic students were accepted.

The references to the 45 papers are not given, for all contributions will appear early in 1948 in the volume published for the Association for Research in Nervous and Mental Disease by the Waverly Press of Baltimore, Maryland.

CHILD PSYCHIATRY. MENTAL DEFICIENCY

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While clinical work, research, and teaching have continued their forward stride, while attempts have been made to improve existing facilities, while efforts are under way to standardize (not freeze, it is hoped) the methods of training, one important area of child psychiatry has shown no sign of desperately needed expansion. The available number of beds for psychotic, near-psychotic, and epileptic children has remained lamentably small. Attempts to place such children in hospitals offering adequate facilities for therapy lead invariably to frustration. The existing places, so few that they can be counted on the fingers of one hand, rarely have a vacancy, and even some of these are (and must of necessity be) so expensive that only the most affluent can send their children there. One can only hope for an improvement of this depressing situation.

In all other areas, satisfactory progress can be reported.

Meetings.—A Conference on Mental Health Aspects of Pediatrics was held in March, 1947, in Hershey, Pennsylvania, under the auspices of the Commonwealth Fund. In this informal gathering, representative pediatricians, psychiatrists, and social workers discussed matters of essential principles, training of physicians, psychologically wholesome handling of healthy and sick children, problems involved in hospitalization, the rooming-in plan, attitudes, and facilities. The importance of training "com-

prehensive" pediatricians with a psychiatric orientation was stressed. The proceedings will be published shortly.

In the Section on Psychopathology of Childhood at The American Psychiatric Association meeting in May, Despert presented an enlightening report on delusional and hallucinatory experiences of children; Berger discussed attitudes of frustrated career mothers toward their children; Allen spoke of the collaboration of psychiatry and social work; Schafer and Leitch reported a study of a battery of psychological tests with preschool children; and Gardner called for a consideration of the standards of training now deemed necessary for the practice of child psychiatry. (This is also the aim of the *American Association of Psychiatric Clinics for Children* which constituted itself in February, 1947.)

Of the round tables arranged by the American Orthopsychiatric Association at its 1946 meeting and published in 1947(1), the one on "learning as a psychosomatic problem" is of special interest to child psychiatrists. Particular attention is given to the personally determined visual response (Bartley), neurologic (Cole), and pedagogic (Gates, Donohue) aspects, and ocular factors (Berens and Enos) in connection with reading disabilities.

Books.—An important book, published in Switzerland in 1945, did not reach these shores until recently. It is the second edition of Tramer's *Lehrbuch der allgemeinen Kinderpsychiatrie*(2). This ambitious work considers in its 481 pages "general" issues rather than specific phenomenology. Though modern advances in psychotherapy are given little heed, the problems of development, psychopathology, diagnosis, and mental hygiene are taken up in scholarly fashion.

The *Handbook of Child Guidance*(3), edited by Harms, contains 20 contributions by leading psychiatrists, pediatricians, psychologists, social workers, educators, jurists, and others active in the field. It offers a historical survey; discusses guidance of the normal, physically handicapped, and retarded child; considers training in child guidance, social and religious aspects, and the Freudian, Adlerian, and Jungian viewpoints.

Cameron brought out a new (the fifth) edition of his popular little book, *The Nervous Child*(4). Its continued emphasis on the constitutional factor disappointingly precludes a grasp of psychodynamics.

Benda's book on mongolism and cretinism(5), published in 1946 (too late for inclusion in last year's review), is an outstanding contribution. It sheds much light on a hitherto obscure condition and offers therapeutic possibilities (thyrotropic hormone) which, though far from claiming miracles, dispel the prevailing attitude of utter hopelessness.

Periodicals. The Nervous Child brought out 3 important symposia. One represents a summing up of our present-day knowledge of the infantile epilepsies and considers neuropathology, emotional factors, personality structure, drug therapy, education, and vocational problems. A second issue deals with the "psychopathology and psychotherapy of camping," a topic which has hitherto received little attention from most students of child guidance. A third symposium centers around "ego development and ego deviation."

Ernest Harms, who has seen *The Nervous Child* through from meager beginnings to a first-rate publication, introduced in 1947 *The Journal of Child Psychiatry*, intended as "an international forum" with the aim of "furthering mental hygiene in childhood." The first issue contains 3 monographs on the subjects: children's awareness of sex differences (Conn and Kanner(6)), a psychogenic approach to epilepsy (Fuchs(7)), and the dynamics of psychotherapy in the group (Sternbach(8)).

The AMERICAN JOURNAL OF PSYCHIATRY presented what might be referred to as a symposium on residential treatment facilities and methods. Dixon(9) described the work with epileptic children at the Caro, Michigan, State Hospital; Dub(10) discussed institutional treatment of delinquents; and Robinson(11) pointed out the dynamic factors involved in the use of residence in the psychiatric treatment of children. Hart(12) gave a detailed case report illustrating the therapeutic rôle of the psychiatric nurse in a children's ward; a restless, destructive epileptic and feebleminded 7-year-old boy was helped within a year to become "a fairly happy, reasonably tractable little boy."

Among the other significant articles of the year, I should like to single out a few for specific mention. Missildine and Glasner(13, 14) offered in the two leading pediatric journals a "reorientation" about stuttering, emphasizing psychodynamics, psychotherapy, and the therapist-child relationship in specific speech correction. Despert(15) sounded a hopeful note regarding ambulatory psychotherapy, as contrasted with institutional treatment, of schizophrenic children. An excellent review of the problems of childhood schizophrenia was presented by Bender(16) on the basis of a study of 100 patients. Fabian and Bender(17) studied 86 children who had sustained head injuries, from the points of view of "general factors" (age, sex), "specific factors" (feeblemindedness, epilepsy, psychosis), and "accident proneness" with its psychogenic implications. Kundert's(18) paper on fear of desertion by mother gives instructive examples of a problem well known in children's psychiatric clinics, a problem which should also be better understood by teachers confronted with pupils reluctant to go to, or remain in, school. Lemkau and Cooper(19) demonstrated the value of a well-baby clinic "for increasing the ability to deal with the recurrent emotional stresses and strains incident to living."

Mental Deficiency.—Popular magazines made it appear as if the millennium had come for the feebleminded. The various digests especially announced to the public that a certain drug and a certain educational method whipped I.Q.'s up to normal. Glutamic acid was the miracle drug of the year. Following the observations by Zimmerman and Ross(20) and Albert and Warden(21) that the learning ability of rats increased when glutamic acid was added to the food, Albert, Hoch, and Waelsch(22) and Zimmerman, Burgemeister, and Putnam(23) attained in a small number of defectives (8 and 9, respectively) I.Q. increases of a few points. A cry of hosanna went up in the press, and we are in for an era in which glutamic acid will take the place of the discredited cortin.

A teacher named Bernadine Schmidt had the excellent idea to instruct 9-to-12-year-old defectives in matters of practical living and to make "learning" interesting to them. The children were helped substantially in their life adjustments. The press trumped up her undoubtedly valuable contribution as a means to end all low I.Q.'s. We shall hear more of the Schmidt method in 1948.

In view of these developments and the wide publicity which they are receiving, it was refreshing to come upon an article by Doll(24), entitled: "Is Mental Deficiency Curable?" Doll stated: "The literature and experience on situational influences suggest that the social expression of individuality may be advanced within limits through environmental stimulation, or retarded through lack of such stimulation, but the evidence for bonafide changes from deficiency to normality and vice versa is quite inadequate for positive appraisal."

BIBLIOGRAPHY

1. Am. J. Orthopsychiat., **17**: 381.
2. Basel: Bruno Schwabe & Co.
3. New York: Child Care Publications.
4. London: Oxford Univ. Press.
5. New York: Grune & Stratton.
6. J. Child Psychiat., **1**: 3.
7. Ibid., **1**: 58.
8. Ibid., **1**: 91.
9. Am. J. Psychiat., **103**: 811.
10. Ibid., **103**: 818.
11. Ibid., **103**: 814.
12. Ibid., **104**: 132.
13. J. Ped., **31**: 300.
14. Am. J. Dis. Children, **74**: 218.
15. Am. J. Psychiat., **104**: 36.
16. Am. J. Orthopsychiat., **17**: 40.
17. Ibid., **17**: 68.
18. Ibid., **17**: 326.
19. Ment. Hyg., **31**: 449.
20. Arch. Neurol. & Psychiat., **51**: 446.
21. Science, **100**: 476.
22. J. Nerv. & Ment. Dis., **104**: 263.
23. Arch. Neurol. & Psychiat., **56**: 489.
24. Am. J. Ment. Def., **51**: 420.

PHYSIOLOGICAL TREATMENT

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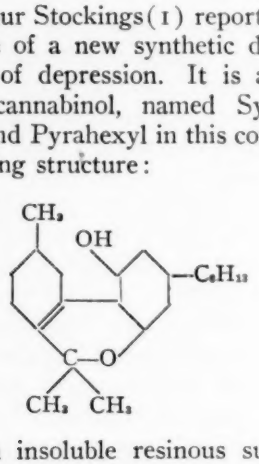
TWO NEW DRUGS

G. Tayleur Stockings(1) reported the successful use of a new synthetic drug in the treatment of depression. It is a synthetic tetrahydrocannabinol, named Synhexyl in England and Pyrahexyl in this country, with the following structure:



It is an insoluble resinous substance of slow action, administered by mouth in doses of 15-90 mg., with a specific euphoriant effect lasting 8 to 10 hours. According to Stockings, there are no significant associated changes in intellectual function, no vegetative effects, and no hangover. It does not impair sleep and does not lead to addiction. Unlike cannabis and mescaline, with which it is allied, it is supposed to induce no delusional nor hallucinatory experiences. According to Stockings' report it was singularly effective in 36 of a series of 50 cases of chronic long-standing depression that had been resistant to other forms of treatment. Its action, unlike shock treatment, is merely supportive, however. Symptoms return when medication stops and it is not a substitute for electroshock in acute depressions. According to unofficial reports of trials here, it sometimes causes excitement and psychotic symptoms, and experimentation is proceeding cautiously.

In Stockholm, Dr. Holger Hyden(2) of the Karolinska Institute, using a new ultraviolet spectroscopic technique, claims to have found a deficiency of cellular polynucleotide in the brain tissue of schizophrenic and manic-depressive patients, and to have had promising results in relieving the symptoms in a series of 100 cases by administering malononitrile, a nucleotide precursor. The claims have been disputed in some Swedish quarters.

SHOCK TREATMENT

In the general field of physiological treatment electroshock continues to hold the center of interest. Two substantial monographs on the subject appeared in the course of the year, one in France(3), and one in Norway (4). For a valuable lengthy coverage of the recent literature through 1946 the reader is referred to the review by Wilcox(5). Stanley Cobb's annual review(6) also contains much that is valuable, though he continues to maintain an undue scepticism toward the value of shock treatment. Müller(7) has made a careful study of the relation between immediate response and prognosis in treatment. He found that the first 3 treatments are usually most significant in that respect—a good response to these generally indicates a good outcome. Results were best in simple endogenous or menopausal depression and were poorest in cases with prominent schizophrenic features. In recurrent depression, treatment not only was valuable at the end of an episode but could also effectively abort an incipient depression. Wilcox(8), in a careful analysis of over 2,000 cases, concludes that 40% of even the most chronic cases can be helped by protracted and persistent treatment.

THE MANAGEMENT OF ELECTROSHOCK TREATMENT

Unidirectional pulsating current produces less confusion, less memory difficulty, and less electroencephalographic change than alternating current, but is also associated with much more apprehension. It is frequently used in combination with sodium pentothal. The *glissando*(9) effect, involving a progressive increment of current, diminishes the force of the initial jolt and the risk of vertebral fracture. A somewhat similar effect can be secured by introducing treatment with a small subconvulsive dose, followed immediately by a *grand mal*(10). Opinion is still divided on the routine use of curare(11). Wilbur and Fortes(12) believe it is helpful in the treatment of old patients. Both Eaton (13) and Brody(14) warn against its use

in cases possibly complicated by myasthenia gravis. Kraines(15) believes it is especially useful in allowing prompt treatment in post-operative cases.

A growing variety of electroshock treatment techniques is being employed. This should lead to greater individualisation of treatment, but the indications for each variation are still too obscure. Müller(7) believes treatment can often be limited to 4 to 6 treatments in cases that respond well. Savitsky and Karliner(16) report that 34% of their cases required 5 or less treatments. Even cases that require more intensive treatment can now be handled in a week or two. Wilcox(8) begins in such cases with daily treatment (using unidirectional current) diminishing the frequency of treatments as patients begin to improve.

Milligan(17) describes a method of intensive treatment, involving up to 4 shocks a day, in which prolonged states of confusion are deliberately induced. He reports excellent results in anxiety states, hysteria, and obsessional states, especially in chronic cases resistant to psychotherapeutic influence. He did not find memory difficulties especially pronounced thereafter. Thorpe(18) also recommends intensive electroshock treatment in acute manic excitement. From 3 to 6 treatments are given in the first day with a gradual diminution of frequency of treatment as the excitement is controlled. Twelve cases were treated successfully in this way without danger or undesirable sequelæ.

Tyler and Lowenbach(19) find they can often shorten the entire period of treatment to 4 or 5 days by administering 4 treatments on the first day and less on succeeding days. A state of confusion is thus maintained throughout the course of treatment; but according to these authors there is no increased tendency to memory difficulty, intellectual defect, or brain damage after treatment is concluded. The authors especially recommend the procedure for schizophrenic patients or agitated depressions, or in other cases where time is an important factor.

Danger and Safety of Electroshock Treatment

Moore(20) treated over 2,000 cases with 2 deaths. One death occurred 4 weeks after a course of 2 subconvulsive and one convulsive treatment in a known severe cardiac. The other death occurred during the night following the first treatment in which 3 subconvulsive shocks were administered. Post-mortem examination revealed intense venous congestion of the brain, with subarachnoid and petechial hemorrhages of the brain substance. Among the other cases treated without mishap were a large number with cerebral arteriosclerosis, several cases of general paresis or meningovascular lues, one case of lead encephalopathy, 57 cases of myocardial disease, 25 with rheumatic heart disease, 21 with hypertensive cardiovascular disease, 25 with coronary disease, plus 9 with proven infarction, 8 with branch bundle block, 5 with A-V block, and 87 with other cardiac disturbances, making a total of 238 with heart disorders. Sixty-three cases had various endocrine disturbances, most often diabetes, pituitary disease, or enlarged thyroid. Forty had skeletal disorders, usually kyphosis or scoliosis, but suffered no complications; 30 had pulmonary disease, including both chronic and active cases of tuberculosis or fibrosis. One pregnant woman, 2 cases with inguinal hernia and 2 with peptic ulcer were all successfully treated, though the authors urge particular caution in cases of active peptic ulcer with crater formation or recent bleeding. Thirty-nine patients were over 60 years of age, the oldest being 74. Of 190 patients with hypertension, all took the treatments well, the hypertension not infrequently improving under treatment. Only one case was lost by suicide. In calculating the risks of treatment the enormously diminished risk of suicide in cases treated promptly should also be weighed in the balance.

Wilbur and Fortes(12) treated 30 cases over 70 years of age with affective disorders, almost all with some complicating disease. Eight deaths occurred, only one of which occurred during actual treatment. Results were good and authors believe the use of electroshock treatment is justified in this age group. Gallinek(21) treated 18 old patients ranging up to 84 years of age with good success. Suicide occurred in one case where institutionalization was advised but refused. Wright(22) treated a woman in her fourth month of pregnancy with a course of 17 electroshock treatments. She made a good

recovery and was delivered of a normal child at term by cesarean section. Kent(23) reports 3 cases treated during pregnancy, with miscarriage induced in one of them by combined electroshock and insulin treatment.

Hierons(24) examined the cerebrospinal fluid of 15 cases that had full courses of electroshock treatment, including 3 cases that had several hundred treatments over a period of years. Findings were entirely negative for cells, protein, globulin, chloride, and Lange curve. Several workers(25) have reported that electroencephalographic changes generally disappear 2 weeks after treatment if less than 10 treatments are given. According to formal psychometric tests(26) intellectual function is restored in about a month. In a valuable and judicious discussion of the problem of brain damage from electroshock treatment, Alpers(27) concludes that "changes of some sort occur as the result of electrical shock treatment. The probabilities are that these are functional in nature in the ordinary case and are unattended by permanent or irreversible brain damage." He believes that the possibility of damage must however be borne in mind in all cases given intensive or prolonged treatment, or in the presence of pre-existing brain pathology, such as cerebral arteriosclerosis. Though there is no serious danger of fatal or gross brain damage, there is still reason for caution. In this connection it is important to consider the possible factor of psychological damage, for an injudicious, ill-advised, hasty, premature, or poorly managed course of treatment can do serious psychiatric harm to a patient and sometimes more than undo the physiological benefit. Close and sympathetic contact at every stage of treatment is a necessity and the patient's attitude and reaction to each treatment experience is an important consideration in his progress.

Ambulatory Treatment

In London(28), where mental hospitals are crowded, and in Salt Lake City(29), where mental hospitals are scarce, ambulatory treatments are a boon to patients. At Albany Hospital(30) where both inpatient and outpatient facilities are available, most electroshock treatment is given on an outpatient basis. In a valuable discussion of the organization of such a service, Feldman, Gombert, and Barrera conclude that outpatient results are not only comparable to results with hospitalized cases, but in addition often satisfy special therapeutic needs of the patient. Stockfisch(31) had satisfactory results with office treatments in 65 selected cases and recommends wider use. Of 242 cases given office treatment by Kerman(32), only 15, or 6%, required later hospitalization. The author recommends the procedure as a preventive of hospitalization. Stewart (33) also believes that ambulatory or office treatment is indicated in a large number of cases, especially for maintenance treatment of cases that would otherwise be institutionalized. Fetterman(34) found that half of his cases could be treated on an ambulatory basis. He and his associates(35) believe it saves time, money, and prestige for the patient and his family, and often promotes psychiatric recovery by encouraging the patient to continue his normal routine. They reproduce an excellent instruction sheet for the patient's family which should be more widely used. All these authors recognize that actively suicidal or otherwise disturbed or troublesome patients should be hospitalized. Even in cases awaiting admission to a hospital treatment may diminish the danger of suicide. Kraines(15), in a sensible general discussion of the problem, pleads for great individualisation of treatment, not only with regard to the psychotherapeutic management of the case, but also with regard to the locale of treatment. Certain cases are best treated in the office, some in outpatient facilities, some in hospitals, and some even in their own homes. In addition certain cases can be best treated on nonpsychiatric wards of general hospitals. Postpartum and postoperative psychoses can sometimes be checked with a few treatments without removal from the general hospital and without interruption of their medical care. "The decision for general hospital (office or home) or sanitarium care," Kraines concludes, "must depend on the judgment and clinical experience of the psychiatrist guided by the history of the illness, the symptoms manifested, the intensity of the self-destructive drives, and the patient's cooperativeness and rapport with the physician."

Sleep Treatment

Heldt(36) describes a variant of prolonged narcosis treatment that he has used with good success in 200 cases, especially in cases of severe neurosis, including traumatic neurosis, and reactive depression. He induces sleep with intravenous sodium amytal, supplemented by administration of the same drug by mouth or intramuscular injection. The patients sleep 12 to 20 hours a day for 5 to 12 days, rousing only enough to take liquid nourishment and attend to excretory functions. As the patient's resistance to the drug increases, a point is found where a delirium can be induced by the abrupt withdrawal of medication. On theoretical and empirical grounds the authors aim for this delirious reaction, which generally supervenes in 2 to 3 days and lasts 3 to 6 days. Most cases respond to treatment. The minority of cases that fail to develop delirium generally fail to benefit from the procedure.

Walsh(37) recommends the oral administration of Somnifaine (a Veronal-Alurate solution) as the method of choice in prolonged narcosis treatment. Patients may be kept under its influence as long as 15 days without danger, though the treatment requires careful management and some patients may develop cardiovascular difficulties. The results are said to be particularly good in anxiety states and affective psychoses. For details of management the reader is referred to the original paper.

Insulin Treatment

Bond and Shurley(38), on the basis of over 9 years' experience with over 300 schizophrenic cases, conclude that an insulin ward is a good investment. Of the cases of less than 18 months' duration 63% were recovered or much improved after treatment, and in 39% the improvement was well maintained—results which seem to them at least twice as good as in their controls. Subshock insulin is being widely used(39) in the treatment of alcoholism(40) and anxiety states (41), sometimes in combination with electroshock(42) or sodium pentothal treatment (43). Paster and Holtzman(44) remind us that cases that fail with electroshock may respond to insulin. Stimulated by Gjessing's work on nitrogen balance in schizophrenia, Harris studied the behavior of the various blood amino acids during insulin treatment, without however yet venturing to make any clinical correlations(45).

Value of Shock Treatment

Statistical reports of large series of cases continue to appear. Dedichen's monograph (4) contains a detailed analysis and comparison of 1,459 shock-treated and 969 non-shock-treated psychoses in 17 Norwegian hospitals. According to his figures, the immediate results in cases of schizophrenia of less than one year's duration are 4-5 times as good as in the untreated controls. In the manic-depressive cases the actual frequency of remission is of course not significantly changed by treatment, but the duration of illness is very much shortened. In this country Hinko and Lipschutz(46) in a 5-year follow-up study of shock treatment find not only that the treatment increased the remission rate, but that remission after treatment occurred in one-third the time required for spontaneous remission, saving each treated case an average of 422 days of hospitalization. Rickles(47) reports a series of 200 cases with essentially similar results.

Physiological Treatment of Neuroses

There is an increasing tendency to include physiological treatment in the management of certain cases of neuroses. At Bloomingdale(48) about one-third of the cases diagnosed as psychoneurotic were thought to be suitable for a cautious use of electroshock treatment, mainly because of a rigid resistance to psychotherapeutic influence. Results justified its use as an adjunct to psychotherapy, especially in cases with prominent depressive features, tension, or anxiety. Stockings(49) found electroshock treatment especially effective in cases of depersonalisation. Several of the papers cited above involve work with psychoneurotics. On the experimental level Masserman and Jacques (50) observed the effect of electroshock on the experimental neuroses of cats. They found that it relieved inhibitions, phobias, compulsions, and other neurotic patterns, at the cost of some impairment of higher inte-

grative functions. Autopsy studies revealed no correlation to histopathologic change.

Inhibitory symptoms in psychoneuroses can be relieved by other means. Brewster (51) has revived interest in the use of ether to induce hypnosis as an aid to psychotherapy. Hysterical deafness or functional inhibitory components in organic deafness can be relieved by combined barbiturate narcosis and psychotherapy (52). Similarly, the functional inhibitory component in organic aphasia can be treated with intravenous sodium amytal (53). Peripherally the smooth muscle spasms often regarded as "conversion" symptoms in tension states can often be helped by papaverine (54).

Meduna (55), extending Loevenhart's earlier observations on the effect of CO_2 inhalation on psychotics, has developed a CO_2 narcosis treatment involving the production of unconsciousness by administration of 20%-30% CO_2-O_2 mixtures. The treatment, repeated daily for one to several months, is said to have yielded encouraging results in a variety of neurotic conditions, especially anxiety states and conversion hysteria. It may be noted, in this connection, that CO_2 inhalation temporarily impedes oxygen uptake by the brain (56). Karnosh and Gardner (57) induced transient relief for 2-3 days in a case of depression with bilateral stellate ganglion block by deep procaine infiltration.

Electronarcosis

The work with electronarcosis has been taken up in New Zealand (58) and England (59, 60). Tietz (9) has treated a total of 46 cases by this method without a serious complication. The present consensus of opinion is that it has no advantage over ordinary electroshock treatment in depressions, but appears to be especially useful in cases of paranoid schizophrenia (as distinct from chronic involutional paranoid states). It has also been found to be helpful in some chronic neuroses.

Theory of Shock Treatment

Stockings (1) thinks depressions are a form of thalamic dystonia and attributes the value of Pyrahexyl to its effect on subcortical rather than on cortical function. A number of workers have reached somewhat similar views with regard to shock treatment on experimental grounds. Gellhorn (61) on the basis of his own experimental work attributes the beneficial effect of shock treatment to the excitation of diencephalic autonomic centers. According to Van Harreveld (62), the actual neurological response of dogs to an electroshock or electronarcosis treatment is not appreciably altered by decortication. Heath and Norman (63), using small electrodes in the treatment of human subjects to localize the stimulation, also suggest that stimulation of autonomic centers (*e.g.*, Brodmann's area 11 at the frontal poles) can induce amelioration of symptoms even when no convulsion ensues.

Miscellaneous

Cobb (6) calls attention to the work of Russian psychiatrists (64, 65) who claim to have produced remissions in a majority of their schizophrenic patients by provoking severe allergic reactions by means of repeated injections of incompatible blood. Reese and Kant (66) on empirical grounds recommend aminophylline (1½-3 gr. q.i.d.) for acute confusional states associated with cerebral arteriosclerosis and hypertension, as a substitute for barbiturates, opiates, and scopolamine, all of which are often poorly tolerated.

BIBLIOGRAPHY

1. Stockings, G. T. Brit. Med. J., **1**: 918, 1947.
2. Laurence, W. L. N. Y. Times, July 16, p. 18, 1947.
3. Delay, J. L'électro-choc et la Psycho-Physiologie. Masson & Co., Paris, 1946.
4. Dedichen, H. H. A comparison of 1459 shock-treated and 969 non shock-treated psychoses in Norwegian hospitals. 160 pp. Acta psychiat., Kbh., Suppl. 37, 1946.
5. Wilcox, P. H. Shock Therapy. Page 435 in Spiegel's Progress in Neurology and Psychiatry, Grune & Stratton, New York, 1947.
6. Cobb, S. Arch. Int. M., **79**: 113, 1947.
7. Müller, C. Schweiz. Arch. Neur. Psychiat., **58**: 286, 1947.
8. Wilcox, P. H. Am. J. Psychiat., **104**: 100, 1947.
9. Tietz, E. B. J. Nerv. Ment. Dis., **106**: 150, 1947.
10. Kalinowsky, L. B. Arch. Neur. Psychiat., **57**: 707, 1947.
11. Donovan, J. F. Lancet, **1**: 634, 1947.
12. Wilbur, C. B., and Fortes, A. Am. J. Psychiat., **104**: 48, 1947.

13. Eaton, L. M. Proc. Mayo Clin., **22**: 4, 1947.
14. Brody, M. Dis. Nerv. Syst., **7**: 344, 1946.
15. Kraines, S. H. Illinois M. J., **91**: 291, 1947.
16. Savitsky, N., and Karliner, W. Am. J. Psychiat., **104**: 197, 1947.
17. Milligan, W. L. Lancet, **2**: 516, 1946.
18. Thorpe, F. T. J. Ment. Sc., **93**: 89, 1947.
19. Tyler, E. A., and Lowenbach, H. N. Carolina M. J., **8**: 577, 1947.
20. Moore, M. T. Arch. Neur. Psychiat., **57**: 693, 1947.
21. Gallinek, A. N. Y. State J. M., **47**: 1233, 1947.
22. Wright, L. Memphis M. J., **22**: 149, 1947.
23. Kent, E. M. Psychiat. Quart., **21**: 102, 1947.
24. Hierons, R. Lancet, **1**: 158, 1947.
25a. Moriarty, J. D., and Siemens, J. C. Arch. Neur. Psychiat., **57**: 712, 1947.
25b. Weil, A. A., and Brinegar, W. C. Arch. Neur. Psychiat., **57**: 719, 1947.
26. Stone, C. P. J. Comp. Physiol. Psychol., **40**: 183, 1947.
27. Alpers, B. J. J. Lancet, **66**: 363, 1946.
28. Paterson, A. S. West London M. J., **52**: 42, 1947.
29. Moench, L. G. Rocky Mountain M. J., **43**: 808, 1946.
30. Feldman, F., Gombert, E., and Barrera, S. E. J. Nerv. Ment. Dis., **105**: 171, 1947.
31. Stockfisch, R. H. J. M. Soc. N. Jersey, **44**: 47, 1947.
32. Kerman, E. F. J. Nerv. Ment. Dis., **106**: 1, 1947.
33. Stewart, B. California M., **65**: 282, 1946.
34. Fetterman, J. L. Ohio M. J., **42**: 1133, 1946.
35. Fetterman, J. L., Friedman, M. D., and Weil, A. A. Dis. Nerv. Syst., **8**: 5, 1947.
36. Heldt, T. J. Am. J. Psychiat., **104**: 27, 1947.
37. Walsh, J. J. Ment. Sci., **93**: 255, 1947.
38. Bond, E. D., and Shurley, J. T. Am. J. Psychiat., **103**: 338, 1946.
39. Sargant, W., and Slater, E. J. Nerv. Ment. Dis., **105**: 493, 1947.
40. Vassaf, E. G., and Hall, V. R. N. England J. M., **235**: 190, 1946.
41. Hohman, L. B., and Kline, C. L. Dis. Nerv. Syst., **7**: 293, 1946.
42. Polatin, P., and Spotnitz, H. N. York State J. M., **46**: 2648, 1946.
43. Stratton, H. G., Hobbs, G. E., and Carscallen, H. B. Am. J. Psychiat., **104**: 56, 1947.
44. Paster, S., and Holtzman, S. C. J. Nerv. Ment. Dis., **105**: 382, 1947.
45. Harris, M. M., and Harris, R. S. Proc. Soc. Exp. Biol. M., **64**: 471, 1947.
46. Hinko, E. N., and Lipschutz, L. S. Arch. Neur. Psychiat., **58**: 244, 1947.
47. Rickles, N. K. Am. J. Psychiat., **104**: 52, 1947.
48. Hamilton, D. M. Am. J. Psychiat., **103**: 665, 1947.
49. Stockings, G. T. J. Ment. Sc., **93**: 62, 1947.
50. Masserman, J. H., and Jacques, M. G. Am. J. Psychiat., **104**: 92, 1947.
51. Brewster, H. H. N. England J. M., **235**: 357, 1946.
52. Semenov, H. Tr. Am. Acad. Ophth. Otolar., **51**: 326, 1947.
53. Linn, L. Arch. Neur. & Psychiat., **58**: 357, 1947.
54. Tyhurst, J. S. California M., **67**: 25, 1947.
55. Meduna, L. J. Dis. Nerv. Syst., **8**: 37, 1947.
56. Gibbs, F. A., Maxwell, H., and Gibbs, E. L. Arch. Neur. and Psychiat., **57**: 137, 1947.
57. Karnosh, L. J., and Gardner, W. J. Cleveland Clin. Q., **14**: 133, 1947.
58. Medlicott, R. W. N. Zealand M. J., **46**: 280, 1947.
59. Paterson, A. S., and Milligan, W. L. Lancet, **2**: 198, 1947.
60. Caplan, G. Lancet, **2**: 368, 1947.
61. Gellhorn, E. Proc. Soc. Exp. Biol. M., **64**: 375, 1947.
62. Van Harreveld, A. J. Neuropath. **6**: 177, 1947.
63. Heath, R. G., and Norman, E. C. Proc. Soc. Exp. Biol. Med., **63**: 496, 1946.
64. Khalurian, G. M. Neuropat. i psikhiat., **14**: 40, 1945.
65. Galenko, V. E., and Kirilova, A. Z. Ibid., **14**: 38, 1945.
66. Reese, H. H., and Kant, F. Am. J. Psychiat., **103**: 731, 1947.

OUTPATIENT MENTAL CLINICS AND FAMILY CARE

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OUTPATIENT MENTAL CLINICS

In common with all psychiatric services, outpatient clinic work suffered a serious decline during the late war. Psychiatrists and social workers were lacking and mental hospitals had great difficulty in caring properly for their intramural patients. Some gain in outpatient work was made and more was projected in 1946, and a substantial advance was made in 1947. Apparently every state which carries on outpatient clinic service has expanded the work during the past year. For example, New York State, which previous to the war was conducting child guidance clinics with 3 clinic teams, now has 8 teams. The clinic service, which formerly was

limited to diagnosis and recommendations, now includes psychiatric treatment when indicated. The clinics held monthly now number about 150 as compared with 100 previous to the war. Funds are available for 3 additional clinic teams. These will be organized as soon as personnel therefor can be found.

The Veterans Administration is making psychiatric service available to veterans in all sections of the country. Such service is provided in part by contract mental hygiene clinics of which there are about 70 in populous centers in the various states. In addition, the Veterans Administration is conducting, with its own personnel, 35 clinics in large cities. Six of these clinics were organized during the past year. Supplementing these a large clinic is soon to be opened in Brooklyn and a second community outpatient clinic is to be operated in Manhattan.

Three significant developments in outpatient service have been made in Maryland during the past year: 1. The child guidance clinic at the University of Maryland has opened an evening adult clinic on a teaching basis. 2. A strictly therapeutic teaching program has developed in connection with the Phipps Clinic outpatient service. 3. The United States Public Health Service has proposed the establishment of a demonstration psychiatric clinic in the Maryland area.

The director of the mental hygiene division of the U. S. Public Health Service reports that 39 states and territories have submitted state mental health programs in which Federal funds are to be utilized. Funds totaling $1,732,000.00 have already been budgeted for outpatient clinics and other mental health activities related to patients who are not in institutions. With these funds available, a remarkable increase in patient services should be made during the coming year.

Among the papers relating to outpatient psychiatric service published during 1947, two deserve special mention. The first of these is the presidential address given by Dr. Spafford Ackerly at the 1947 annual meeting of the American Orthopsychiatric Association and is entitled "The Clinic Team." We quote a few sentences from this address.

The next great step in the public health field in this country is the extension of mental hygiene and child guidance services to all of the states. Every qualified mental hygienic clinic in existence today should become a training center for psychiatrists, social workers, and psychologists in community mental hygiene. The way is paved; the time is ripe; the day is here. So far as our clinics are concerned, there are pressing needs in the direction of critical evaluation of existing measurements, the development of new ones, and the application of these techniques to untouched clinical material; new personality and aptitude tests for the selection of applicants for professional and non-professional vocations; and the objective evaluation of the results of various therapeutic techniques.

In a second paper, entitled "The New Public Psychiatry," Dr. George H. Preston advocates an extension of outpatient clinic service beyond the mental hygiene clinic into the homes of patients with mental disorders. He would have the psychiatrists of state mental hospitals become available to families in need of their services. Some years ago Dr. Gustav Kolb organized psychiatric service for the families living in the district served by the mental hospital at Erlangen. At one time about 4,000 patients living in their own homes were given psychiatric service by the physicians connected with the hospitals. Apparently, good results were achieved in this undertaking but it does not appear that the experiment was copied elsewhere. Dr. Preston's proposal is new for America and seems worthy of a trial.

Family Care

In the states in which family care is well organized, the system has been carried along during the past year at about the level of previous years. Rates for care have been increased in accordance with the high cost of living, but there seems to be more difficulty in finding good homes for patients. Very little literature on the subject of family care was published during the year. It is probable that more interest in family care will be taken as the country gets on a more normal basis.

BIBLIOGRAPHY

Ackerly, Spafford. The clinic team. Am. J. Orthopsych., April 1947.

Pollock, Horatio M. Family care of mental defectives in Scotland. Am. J. Ment. Def., July 1947.

Preston, George H. The new public psychiatry. Ment. Hyg., April 1947.

Statistical reports of State Department of Public Welfare of Illinois, 1947.

News release of New York State Department of Mental Hygiene, May 19, 1947.

Personal communication from V. C. Branham, Asst. Chief, Outpatient Section, Neuropsychiatry Division, U. S. Veterans Administration, Oct. 14, 1947.

Personal communication from R. H. Felix, Chief, Mental Hygiene Division, U. S. Public Health Service, Oct. 17, 1947.

Personal communication from A. Z. Barhash, Director, Division of Community Clinics, National Committee on Mental Hygiene, Oct. 24, 1947.

PSYCHIATRIC NURSING

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Psychiatric nursing progressed perceptibly during the year. Developments previously reported continued and increased.

A new activity of far-reaching significance is the authorization of grants by the U. S. Public Health Service to universities and other training centers for the training of psychiatric nurses at the graduate level, made possible by the National Mental Health Act. Nine universities received training grants for the fiscal year 1948 to increase the number of students enrolled in postgraduate nursing courses. Special emphasis was placed this first year on the preparation of nurse instructors in psychiatric nursing for university, hospital, and community service staff and psychiatric supervisors for hospital and community service staffs.

Approximately 150 nurses are enrolled, in the universities reporting, in programs offering advanced psychiatric nursing. Of this number, 53 are recipients of stipends made available under the National Mental Health Act through the institutions collaborating with the U. S. Public Health Service in the training program.

One report [1] includes the following items: "Advanced psychiatric nursing was initiated in the fall of 1943, and since that time nineteen students have received B. S. degrees in Nursing Education, two M. S. degrees in Nursing Education and forty-two have completed a term in field experience. As graduates the students report participation in educational programs of the Veterans Administration psychiatric hospitals, psychiatric wards of general hospitals and clinics. The program . . . . has expanded to include preparation of nurses for mental hygiene and public health. . . . ."

The Army Nurse Corps continues to provide psychiatric training for its nurses.

A report from the VA includes the following: "Progress is being made in the total VA program. . . . . Administratively, psychiatric nursing has been established as a nursing specialty within the VA nursing service under the direct supervision of a neuropsychiatric nursing specialist. . . . ."

In the U. S. Public Health Service, Hospital Division, 10 nurses are participating in an in-staff psychiatric nursing program being conducted at the U. S. Public Health Service Hospital at Fort Worth, Texas. In addition, 3 nurses from the Hospital Division and 2 from the Bureau of State Services are attending universities, preparing for work in psychiatric nursing and mental hygiene.

A prize-winning book entitled "Nurse-Patient Relationships in Psychiatry," published this year, presents psychiatric nursing in a refreshing and sincere manner. (McGraw-Hill Book Company, Publisher; Helena Willis Render, Author.)

The American Journal of Nursing has carried articles and items on psychiatric nursing in each issue. Psychosomatic aspects of illnesses are presented with increasing frequency.

Connecticut has joined the states requiring psychiatric nursing experience in the basic course offered to nurses.

Shortages in qualified personnel continue to be a serious problem. More and better prepared nurses are constantly being employed but the demand continues to keep ahead of the supply. This is progress of a kind.

[1] Catholic University of America, Washington, D. C. Theresa G. Muller, Associate Professor, Coordinator in Advanced Psychiatric Nursing.

OCCUPATIONAL THERAPY

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The coordination of occupational therapy with vocational rehabilitation programs continues, both under the sponsorship of the Veterans Administration and Federal, State and Community aid services. The most significant developments are in the fields of organization and expansion of well-known methods and technique.

The Veterans Administration is placing great stress on rehabilitation and there are many programs under way which are providing valuable service to the veteran. Schools for the training of personnel are being set up and it is hoped that there will be valuable advances in this field forthcoming in the future.

Vocational rehabilitation services for civilians are organized under a joint Federal-State program which is administered through the Office of Vocational Rehabilitation of the Federal Security Agency. Shortley(1) states that vocational rehabilitation services are provided to enable disabled persons to find an occupational adjustment in which they are best fitted to make their contributions to society and in return to derive a maximum of remuneration from society. During the fiscal year ending June 30, 1946, there were 1,954 mental patients out of a total of 36,106 patients rehabilitated through this program. This is a paltry figure in comparison with the job which is present in this country, but this represents a definite start toward the inclusion of the mentally ill in a civilian rehabilitation program and it is hoped that the results will justify increasing effort in this direction. Such a program will require the availability of trained personnel and advisors, as well as special facilities in the community for initial treatment and activation of mentally ill patients, rather than the present necessity for commitment to State Hospitals.

Music as an adjunctive therapy has received some emphasis and has excited comment in various newspapers and magazines. Piper(13) discusses a diversified musical program for use in the treatment of psychiatric patients and Tilly(10) discusses the psychoanalytic approach to music.

Jones(6) describes an "Industrial Neurosis Unit" set up by the British Government as part of a larger center to treat neuroses among the general population and this illustrates a new approach to the treatment of neuroses among an industrial group by segregation, education, and retraining.

Educational therapy is being given more recognition by the Veterans Administration with an enthusiastic response from the participants. There is increasing evidence of the value of such a program, and this might be profitably emphasized in Federal and State aid services.

Davis(9) has a good discussion of the types, techniques, and classification of activities used in a rehabilitation program in a mental hospital.

Callbeck(2) analyzes the dynamic components of games and describes practical application of some games with psychiatric patients.

Slavson(19) in his new book outlines the dynamic considerations in a recreational program and some methods of organizing group and community recreation.

The American Journal of Occupational Therapy is a new journal in this field and is the official publication of the American Occupational Therapy Association.

BIBLIOGRAPHY

1. Shortley, Michael J. Vocational rehabilitation. Occup. Ther., **26**, No. 4, August 1947.

2. Callbeck, Helen, B.A., M.A. The use of social and nonequipment games in occupational therapy. Occup. Ther., **26**, No. 2, April 1947.

3. Church, Aloysius S., M.D., and Gooden, Genevieve, O. T. R. Occupational therapy in psychiatric treatment. Occup. Ther., **26**, No. 2, April, 1947.

4. Exton, Patricia A., O.T.R. Studies in occupational therapy. Occup. Ther., **26**, No. 2, April 1947.

5. Lockerbie, Lynn, O.T.R., and Stevenson, G. H., M.D. Socialization through occupational therapy. Occup. Ther., **26**, No. 3, June 1947.

6. Jones, Maxwell. The working of a neurosis unit. Occup. Ther., **26**, No. 3, June 1947.

7. Ling, T. M., M.D., M.R.C.P. Roffey Park Rehabilitation Centre. Occup. Ther., **26**, No. 3, June 1947.

8. Tompkins, H. J., M.D., and Snedeker, A. W.,

M. D. Care and treatment of the psychiatric patient in the Veterans Administration. Am. J. Psychiat., 103: 4, January 1947.

9. Davis, John Eisele, Sc. D. Exercises in the medical rehabilitation of mental patients. Occup. Ther., 26, No. 4, August 1947.

10. Tilly, Margaret. The psychoanalytic approach to the masculine and feminine principles in music. Am. J. Psychiat., 103: 4, January 1947.

11. Hall, John. Employment for the disabled in Britain. Am. J. Occup. Ther., 1: 3, June 1947.

12. Solomon, Alfred P., M. D. Occupational therapy, a psychiatric treatment. Am. J. Occup. Ther., 1: 1, February 1947.

13. Piper, Bertha J., O. T. R., and Winchester, Mrs. B. S. There is a "reach" to music. Am. J. Occup. Ther., 1: 2, April 1947.

14. Veterans Administration, Department of Medicine and Surgery Information Bulletin, IB-10-5-4.

15. Veterans Administration, Department of Medicine and Surgery Information Bulletin, IB-10-5-7.

16. Veterans Administration, Department of Medicine and Surgery Information Bulletin, IB-10-5-1.

17. Veterans Administration, Department of Medicine and Surgery Information Bulletin, IB-10-5-5.

18. Veterans Administration, Department of Medicine and Surgery Information Bulletin, IB-10-5-2.

19. Slavson, S. R. Recreation and total personality. New York Association Press, 1946.

PSYCHIATRIC SOCIAL WORK

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During 1947, psychiatric social work developed on many fronts, strengthening its position as one of the fundamental contributions to psychiatric practice. From the organizational angle there was the further development of psychiatric social work in the Veterans Administration hospitals and mental hygiene clinics, in which service to patients and further training of workers in the profession were stressed. Another major development has been the promotion of psychiatric social work training by the U. S. Public Health Service under the provisions of the National Mental Health Act. During the current fiscal year $200,000 is being expended for psychiatric social work training. Direct grants have been made to 10 schools of social work and scholarship stipends were granted to 40 students in psychiatric social work.

The American Association of Psychiatric Social Work took a major forward step in employing an educational secretary, Miss Madeline Lay, who is working under a 3-year grant from the Commonwealth Fund in the development of sound training programs in schools of social work. Already 15 additional schools of social work have requested the aid of the Association in developing standard programs.

Simultaneously with these developments has come a broadening and deepening of interest on the part of many psychiatrists. Several articles on various phases of psychiatric social work have been contributed by psychiatrists (1-5) and two outstanding reports on psychiatric social work prepared under the vigorous leadership of Marion Kenworthy have been issued by The Group for the Advancement of Psychiatry (6, 7). The first describes the standard curriculum of professional education for psychiatric social work; the second describes clearly and fully the functions and work of the psychiatric social worker in a mental hospital. Both of these reports should be studied by every psychiatrist, for they are outstanding documents representing the careful deliberations and conclusions of a group of psychiatrists and social workers.

The year was unusually productive in terms of publications by social workers. One outstanding book by Gordon Hamilton (8) describes, with much illustrative case material, psychotherapeutic work with children by psychiatric social workers in the Jewish Board of Guardians working under psychiatric direction.

At the beginning of the year the "Newsletter," the official organ of the American Association of Psychiatric Social Workers, became *The Journal of Psychiatric Social Work*. News of the Association and its

[1] With the help of Luther E. Woodward, Ph. D.

members is still carried, but the major emphasis is now on scientific articles.

The Bulletin of the Menninger Clinic published a psychiatric social work number in November, including the GAP report on "The Psychiatric Social Worker in the Mental Hospital," and three other significant articles(9, 10, 11).

The Journal of Social Case Work, published by the Family Service Association of America, also carried many articles dealing with dynamic case work in both psychiatric and nonpsychiatric settings. Additional articles in *Mental Hygiene,* and in other professional publications cover a wide range of subjects. Many are concerned with psychiatric social work in mental hospitals(12, 15). A few articles describe psychiatric social work in a military setting(16-18). Other articles deal with psychiatric social work in the Veterans Administration hospitals or outpatient clinics(3, 19, 20). A number of articles deal with the training of psychiatric social workers(21-23).

There are a considerable number of articles dealing with the treatment aspects of psychiatric social work. While generally agreed that much of the work of the psychiatric social worker is therapeutic, there is a corresponding tendency to differentiate this from the therapeutic work of the psychiatrist. There is discussion of this point in several articles in this series(1, 3, 5, 24-26). Still other articles deal with some of the new frontiers and relationships to other professional groups(27-29) or with case work with the families of mental patients(2, 4, 30, 31).

An excellent brief account of psychiatric social work appeared during the year in a little volume published by the Commonwealth Fund, another of the series of volumes issued under the auspices of the New York Academy of Medicine's Committee on Medicine and the Changing World. This chapter traces briefly the historical development of psychiatric social work, describes its current functions and problems, and indicates the directions of growing interest and expanding need(32).

At the 1947 meeting of The American Psychiatric Association four excellent papers under joint authorship of a psychiatrist and a psychiatric social worker were presented but have not yet been published.

The Psychiatric Social Work Association in England recently began publication of the *British Journal of Psychiatric Social Work.* The first issue contains 11 articles covering a wide range of subjects(33-43).

BIBLIOGRAPHY

1. Szurek, S. A., M. D. Some principles of child guidance practice. J. Psychiat. Case Work, **16**:116.

2. Coleman, J. V., M. D. Psychiatric consultation in case work agencies. Am. J. Orthopsychiat., **17**: 533.

3. Bibring, G. L., M. D. Psychiatry and social work, J. Social Case Work, **28**: 203.

4. Futterman, S., M. D., and Livermore, Jean B. Putative fathers. J. Soc. Case Work, **28**:174.

5. Walker, E. F., M. D. The effectiveness of the psychiatric social worker in the treatment situation. Ment. Hyg., **31**: 590.

6. Standard curriculum of professional education for psychiatric social work. Report by Group for Advancement of Psychiatry. J. Psychiat. Social Work, **16**: 92, 1946-47.

7. The psychiatric social worker in the mental hospital, Report by Group for Advancement of Psychiatry. Bull. Menninger Clin., Vol. **11**, No. 6, November 1947.

8. Hamilton, Gordon. Psychotherapy in Child Guidance. Columbia University Press, 1947.

9. Williams, Margaret. Training in psychiatric social work. Bull. Menninger Clin., Vol. **11**, No. 6, November 1947.

10. Beck, Edith, Boothe, Helvi, M. S. S., and Robbins, L., M. D. A group discussion of the interrelationship of psychiatry and psychiatric social work. Bull. Menninger Clin., Vol. **11**, No. 6, November 1947.

11. Beck, Edith. The development of a social work program at Winter Veterans Administration Hospital. Bull. Menninger Clin., Vol. **11**, No. 6, November 1947.

12. Dewitt, Henrietta. Hospitalization of the mental patient. Ment. Hyg., **31**: 266.

13. Gartland, Ruth. The psychiatric social worker in a mental hospital. Ment. Hyg., **31**: 258.

14. Social workers, large factor in mental patient improvement. Hospital Management, No. 3.

15. Kuehnle, Shirley, and Lowe, Hanna. Use of social service by mental patients on parole. Smith College Studies in Social Work, **17**: 223.

16. Hofstein, Saul. Differences in military psychiatric case work practice. J. Psychiat. Case Work, **17**: 74.

17. Greving, F. T. Group treatment potentialities in an authoritative setting. Ment. Hyg., **31**: 397.

18. Leader, A. The use of psychiatric social work in conjunction with group therapy. J. Soc. Case Work, **38**: 269.

19. Zwemer, Winifred. The psychiatric social worker in a voluntary clinic for veterans. J. Psychiat. Social Work, Vol. **17**, No. 3.

20. Beck, Edith. The development of a social

work program at Winter Veterans Administration Hospital. Bull. Menninger Clin., **11**: 208.

21. Clemence, Esther H. Implications for changing trends in the education of social case workers. J. Soc. Case Work, **28**: 300.

22. Williams, Margaret. Training in psychiatric social work. Bull. Menninger Clin., **11**: 181.

23. Tahl, Toba. An accelerated program for training American Red Cross personnel to work with neuropsychiatric patients. J. Psychiat. Social Work, Winter, 1947.

24. Smalley, Ruth. Psychiatric social worker or psychotherapist? J. Psychiat. Social Work, **16**: 107.

25. Ryerson, Rowena, and Weller, Elizabeth. The private practice of psychiatric case work. J. Psychiat. Social Work, **16**: 110.

26. Buchwalder, Mildred J. Operation Cyprus. J. Psychiat. Social Work, Vol. **17**, No. 2.

27. O'Keefe, D. E. New frontiers in psychiatric social work under the new Mental Health Act. J. Psychiat. Social Work, **17**: 3.

28. Veo, Louise. Psychiatric skills in personnel work. J. Psychiat. Social Work, **17**: 7. Discussion by Axelrod, D. W., and Ginsburg, E.

29. Simon, Melly. A contribution of the psychiatric social worker to the teaching of medical students. J. Soc. Case Work, **16**: 67.

30. Freeman, Henry. Case work with families of mental hospital patients. J. Soc. Case Work, **28**: 107.

31. Ziegllaub, Fred. Requests for psychiatric treatment in a family agency. Ment. Hyg., **31**: 582.

32. Medical addenda—Related essays on medicine and the changing order. Commonwealth Fund, 1947.

33. Waldron, F. E., and Shaw, L. A. Social workers' interviews. Brit. J. Psychiat. Social Work, September 1947.

34. Davies, Lloyd, A. B. Some experiences with two small groups of mothers in a child guidance clinic. Brit. J. Psychiat. Social Work, September 1947.

35. Hicklin, Margot. Character study of German adults. Brit. J. Psychiat. Social Work, September 1947.

36. Bavin, Margaret G. A contribution towards the understanding of the repatriated prisoner of war. Brit. J. Psychiat. Social Work, September 1947.

37. Armstrong, Peggie. Aspects of psychiatric social work in a mental hospital. Brit. J. Psychiat. Social Work, September 1947.

38. Ferard, M. L. Notes on the psychiatric social treatment of mental hospital patients: Four paranoid schizophrenics. Brit. J. Psychiat. Social Work, September 1947.

39. Hunnybun, Noel K. British children in America. Brit. J. Psychiat. Social Work, September 1947.

40. Heckmann, Charlotte. Children from Theresienstadt. Brit. J. Psychiat. Social Work, September 1947.

41. Williams, M. J. B., and Castle, R. M. Notes on initial interviews in child guidance. Brit. J. Psychiat. Social Work, September 1947.

42. Tickle, Margaret. Indications for successful work with parents in a child guidance clinic. Brit. J. Psychiat. Social Work, September 1947.

43. Clarkson, Elizabeth T. A psychiatric social worker at large. Brit. J. Psychiat. Social Work, September 1947.

PSYCHIATRY IN INDUSTRY

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The two main psychiatric emphases which emerged from the recent war and postwar needs in industry, namely human relations and the rehabilitation of the handicapped, featured much of the literary output for 1947 in the domain of industrial psychiatry. This is, of course, a field in which psychiatry, psychology, and other social sciences generally overlap and complement each other to such an extent that each must be examined in the context of the whole to gain an advantageous perspective.

The year began auspiciously with a splendid historical presentation of psychiatric and mental health programs in industry by Rennie and associates of the Division on Rehabilitation of the National Committee for Mental Hygiene, underlining certain basic problems of the industrial situation uncovered by past experience(1). One of these problems is the conflict between loyalty to company and loyalty to the working group, together with a sense of personal futility. Under this aspect falls much of the effort in the field of industrial psychology.

The problem of divided loyalties has shaped the rapidly growing policy of improving channels of communication all along the line from management to worker and back in an effort to eliminate sources of irritation and to grant employees a rôle in the determination of their working conditions. In this effort, foremen and supervisors trained in relationship skills have become singularly

important, and special attention has been directed to their selection and orientation(2, 3, 4). An interesting program of supervisory training based on the rôle-playing technique has been described. Problem situations are acted out by members of the training group with a view to developing constructive self-consciousness by sensitizing the individual to himself and to the effect of his action on others(5). The importance of unceasing vigilance in the matter of grievance procedure has been repeatedly stressed. For grievances, whether basically valid or not according to management and union agreements, are the result of disturbances of emotional adjustment(6). The wildcat strike, which stems from precisely such dynamics, is potentially more damaging to production than a union-called strike. In the former, the real issues may be hidden so that, despite settlement of the strike, the bitterness still simmering below will bring decreased production, increased absenteeism and turnover, and eventually another strike(7).

The social and psychological factors in the work situation have been subjected to close scrutiny. Wage incentive programs, important as these may be, are not of themselves an assurance of good morale and high production. Psychic values or incentives are vitally important, and from the bottom to the top of the organizational pyramid there is a demand for appreciation in addition to status(8). This fact is well illustrated in the area of custodial services. Pointing out how little attention has been directed to the accomplishment of better sanitation through consideration of the personnel concerned in cleaning and maintenance duties, Felton has put forward some excellent suggestions for making this a skilled occupation with a working group of high morale. The improved maintenance of work and rest areas would not only minimize communicable diseases and diminish absenteeism, but also reduce the replacement of valuable machine parts(9).

In the placement field, there has been considerable criticism of existing testing programs despite their proven value in many situations. The reason for this has been that a large variety of tests have been transferred arbitrarily from one situation to another with little if any attention to their validity in the new setup. In describing abuses of this sort, McMurry mentions the employee "consultant' who offers a "package" of ready-made standard test batteries presumed to be universally effective(10). Viteles has underlined the same weakness and has also called for more pertinent applications of social psychology in the field of attitudes and of the psychological aspects of machine design(11). Important in the latter connection, as revelatory of a trend, is the new biotechnical program of teaching and research on the human problems of engineering recently inaugurated as fundamental activities in the Department of Engineering of the University of California(12).

The emerging orientation to the human relations angle of industry's problems is implicit in the organization of the new Nuffield Department of Industrial Health in the University of Durham. The field of study is envisaged as the reciprocal and triple relation between job and health and social state, as opposed to the usual conception of industrial medicine or disease. The effort of this group is therefore to be directed into three interconnected spheres—the outdoor field of industry, in which the man will be considered socially in his group or herd as well as with reference to his physical and mental health and performance; the hospital field, which predicates knowledge of social influences, past and future, acting upon the patient; and the laboratory, where will be studied the intricate and fundamental relation between man and machine(13).

Rehabilitation has achieved an eminent place in the postwar industrial picture, because of not only the ambitious programs in progress for military casualties but also the unexpected success obtained with handicapped workers during the war. That the possibilities of rehabilitation for industrial purposes have scarcely been tapped is implicit in the estimate of Shortly, of the Federal Office of Vocational Rehabilitation, that at least 1½ million people could be employed after careful rehabilitation(14). This presumably includes mentally as well as physically handicapped individuals, since both classes are provided for under the Vocational Rehabilitation Act Amendments of 1943. However,

considerable confusion still obtains over the question of who is actually handicapped. The necessity of differentiating between "physically handicapped" and "occupationally handicapped" has been logically stressed by Hanman(15). In an effort to enlist the full cooperation of the medical profession in the State-Federal program of vocational rehabilitation, the Office of Vocational Rehabilitation in Washington, D. C., issued an important pamphlet explaining the program in detail and indicating the many ways in which physicians may help in implementing it(16).

The literature in the field of rehabilitation is too voluminous for adequate coverage. It deals with a broad range of disabilities ranging all the way from specific psychiatric and neurological conditions through the various modalities of physical disablement with their large psychological component (*e.g.*, 17, 18, 19). The Roffey Park Rehabilitation Center in England is an extremely interesting experiment in the problem of sub-health in industry(20), as is the program of work therapy implemented at Sutton Emergency Hospital for frankly neurotic cases(21). The October, 1947, number of *Occupational Therapy and Rehabilitation* was an international issue replete with contributions in this field from many parts of the world, most of them, of course, concerned with the rehabilitation of the physically handicapped and with occupational therapy as an adjunct to psychiatric treatment for neuropsychiatric conditions proper. More pertinent to the present review, however, is one of these articles which emanates from the Central Institute of Psychiatry in Moscow and parallels much of the experience in rehabilitation elsewhere recorded. It deals specifically with psychoneurotic World War II patients who are stated to comprise about one-tenth of the total number of World War II patients in the U.S.S.R.(22).

With regard to research, the industrial repercussions of neurotic illness remain a challenging field of inquiry. One of the most effective contributions in this area was concerned with the results of a survey made between 1942 and 1944 in England, of the incidence of neurosis among factory workers, its effects on production, and the predisposing factors(23). This was an undertaking of the Industrial Health Research Board of the Medical Research Council under the direction of Dr. Russell Fraser. Of the large random sample of workers studied, 10% had suffered from definite disabling neurosis during the 6 months covered by the survey, and another 20% had suffered from minor neuroses including psychosomatic illness. Neurotic illness caused a fourth to a third of all absence from work due to illness, and a fifth to a fourth of all absence due to whatever cause. Neurosis was, moreover, as prevalent among skilled as among unskilled workers, and almost as frequent among foremen. The serious implications of these figures is seen in the fact that the investigation only covered illness leading to absence. Many of the findings of this outstanding report suggest that measures contributing to good welfare and social work both within and outside the factory, in addition to more extensive facilities for medical treatment, would be beneficial in alleviating or preventing neurosis.

In commenting editorially on Fraser's study, the *British Medical Journal* noted the urgent need for further research into such negative factors affecting production as poor health and neurosis. Submitting that little scientific progress has been achieved in the task of finding those positive influences which might raise the level of output, the *Journal* suggests that the opposite approach may be far more helpful in clarifying the effect on general well-being of the deeper influences which determine effective cooperation, output, and satisfaction in work(24).

Several research studies appeared in the American literature along the lines of labor turnover and absenteeism as functions of poor health, emotional disturbances, and undesirable work attitudes(25, 26). Of great interest and promise is the work in progress at the Research Center for Group Dynamics of the Massachusetts Institute of Technology, and the new journal, *Human Relations,* issued jointly by this Center and the Tavistock Institute of Human Relations.

With the accumulation of experience and research, it becomes increasingly clear that many of the most important problems of contemporary society fall within the purview of industrial psychiatry. This is indeed a field in which future history may be written.

BIBLIOGRAPHY

1. Rennie, T. A. C., Swackhamer, G., and Woodward, L. E. Toward industrial mental health. Ment. Hyg., **31**: 66, Jan. 1947.
2. Eitington, J. E. The post-war supervisor: detective in human relations. Personnel J., **26**: 19, May 1947.
3. Arthur, J. B., Jr. The foreman's place in management. Personnel J., **26**: 42, June 1947.
4. Lewis, P. B. Supervisory training methods. Personnel J., **25**: 316, Mar. 1947.
5. Bavelas, A. Rôle playing and management training. Sociatry, **1**: 183, June, 1947.
6. Smith, F. C. Shop grievances—the human approach. Personnel J., **26**: 95, Sept. 1947.
7. Putney, R. W. A wildcat strike means trouble ahead. Personnel J., **26**: 3, May 1947.
8. Esray-Chase, H. Psychic income for employees. J. Am. Dietet. A., **23**: 870, Oct. 1947.
9. Felton, J. S. Custodial services in plant sanitation. Indust. Med., **16**: 33, July 1947.
10. McMurry, P. N. How efficient are your hiring methods? Personnel J., **26**: 45, June 1947.
11. Viteles, M. S. Industrial implications of wartime developments in psychology. J. Consult. Psychol., **10**: 85, 1946.
12. Taylor, C. L., and Boelter, L. M. K. Biotechnology, a new fundamental in the training of engineers. Science, **105**: 217, Feb. 28, 1947.
13. Browne, R. C. A conception of industrial health. Brit. M. J., **1**: 838, June 14, 1947.
14. Shortley, M. J. Vocational rehabilitation. Occup. Ther. & Rehab., **26**: 201, August 1947.
15. Hanman, B. Who are the physically handicapped? Indust. Med., **16**: 298, June 1947.
16. U. S. Federal Security Agency, Office of Vocational Rehabilitation. The doctor and vocational rehabilitation for civilians. Washington, D. C., 1947.
17. Luongo, E. P. Employment of persons with certain physical and neuropsychiatric impairments. Occup. Med., **3**: 1, Jan. 1947.
18. Fox, J. Tylor. Social aspects of epilepsy. The Lancet, **1**: 775, June 7, 1947.
19. Wittkower, E. Rehabilitation of the limbless. Occup. Med., **3**: 20, Jan. 1947.
20. Ling, T. M. Roffey Park Rehabilitation Centre. Occup. Ther. & Rehab., **26**: 222, Aug. 1947.
21. Jones, M. The working of an industrial neurosis unit. Occup. Ther. & Rehab., **26**: 213, Aug. 1947.
22. Melekhov, D. E. Rehabilitation of psychoneurotic World War II patients in U.S.S.R. Occup. Ther. & Rehab., **26**: 388, Oct. 1947.
23. The incidence of neurosis among factory workers. Medical Research Council. Industrial Health Research Board, Report No. 90, 1947.
24. Neurosis and industry. Brit. M. J., **2**: 257, Aug. 16, 1947.
25. Felton, J. S. Lowering personnel turnover. Indust. Med., **15**: 682, Dec. 1946.
26. Hellman, L. P., Brodman, K., Deutschberger, J. Minor illness, short medical absenteeism, lateness and separation in a mail order firm. Indust. Med., **16**: 14, Jan. 1947.

ADMINISTRATIVE, FORENSIC, AND MILITARY PSYCHIATRY

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ADMINISTRATIVE PSYCHIATRY

To judge from the increasing number of papers dealing with various phases of hospital and clinic administration, it is clear that there is a growing interest, professional and lay, in this very practical phase of psychiatry. Many topics are discussed in the recent literature, a few of which may be briefly mentioned.

Several papers are devoted to the topic of general improvements in the care which may be rendered by mental hospitals, notably those by Fremont-Smith(1), Hamlin(2), and Norman(3). They should be read in full. In the field of planning may be mentioned the statistical article by Dunham and Meltzer(4) on predicting the length of hospitalization of mental patients, and a short paper by Taylor(5) on population trends.

The mounting trend toward the provision of psychiatric facilities in general hospitals is reflected in several articles, such as those by Sister Crescentia(6) on nursing and by Huston and Gottlieb(7) on the psychiatric needs of general hospitals.

Papers on the training of hospital attendants are contributed by Fitzsimmons and Fitzpatrick(8) and Young(9).

Cameron(10) gives an interesting and novel discussion of the day hospital, and Delehanty(11) describes the institutional care of alcoholics.

The always important question of diet is considered by Tallman(12). Industrial applications of psychiatry are discussed by Dershimer(13). Yerbury(14) presents at some length the importance of a public relations program in a mental hospital. General Hawley, Medical Director of the Veterans Administration, who has rendered yeoman

service to American medicine, discusses the place of psychiatry in the Veterans Administration program(15).

In the field of mental deficiency Graham (16) presents the Illinois program for the education of mentally retarded children.

BIBLIOGRAPHY

1. Ment. Hyg., **31**: 354, July 1947.
2. Va. Med. Monthly, **73**: 441, Oct. 1946.
3. Ment. Hyg., **31**: 436, July 1947.
4. Am. J. Sociol., **52**: 123, Sept. 1946.
5. Mod. Hosp., **68**: 77, Apr. 1947.
6. Hosp. Progr., **27**: 313, Sept. 1946.
7. J. Iowa Med. Soc., **37**: 163, Apr. 1947.
8. Am. J. Psychiat., **103**: 685, Mar. 1947.
9. Mod. Hosp., **68**: 75, May 1947.
10. Ibid., **69**: 60, Sept. 1947.
11. Dis. Nerv. Syst., **8**: 40, Feb. 1947.
12. J. Am. Diet. Assn., **23**: 6, Jan. 1947.
13. Am. J. Psychiat. **103**: 145, Sept. 1946.
14. Am. J. Ment. Def., **51**: 525, Jan. 1947.
15. Am. J. Psychiat., **104**: 16, July 1947.
16. Am. J. Ment. Def., **51**: 460, Jan. 1947.

Forensic Psychiatry

Several articles of general interest have appeared during the last year. Karpman(1) attempts a reëvaluation of some concepts of law and psychiatry, and Davidson(2) presents a general orientation to forensic psychiatry in a comprehensive manner. Cohen and Coffin(3) offer an interesting study of the manner in which the psychotic killer's act tends to differ from that of the "normal" murderer. Brigadier Rees(4), in his Clarke Hall lecture, discusses the proper attitude of the criminal law to psychiatry, and vice versa. Gamble(5), Falls(6), and Shartel (7) consider various aspects of sexual sterilization, a topic of interest to the psychiatrist in certain types of cases. In another field, Cornil and Illivier(8) discuss electroencephalography in its medico-legal relations. Professor Hubert Winston Smith's valuable Symposium is represented in this summary by an interesting article by Hunt(9) entitled *Uses and Abuses of Psychometric Tests.*

Meredith(10) and G. H. Stevenson(11) contribute articles on the legal and medical aspects respectively of "insanity" as a criminal defense. Another phase of the same problem is presented by Weihofen and Overholser(12).

Among the books should be mentioned *Contemporary Criminal Hygiene*(13), edited by Seliger, Lukas, and Lindner, and Gray's *Law and the Practice of Medicine*(14).

During the year at least 27 state legislatures considered legislation having to do with the mentally ill. Many of the proposals failed of passage, and some were either routine in character or of merely local interest. California (ch. 919) amended in several particulars the laws relating to hospitalization of the mentally ill. It added certification (ch. 1061), that is, admission without court order on the recommendation of the local health officer and written statements from two physicians. The commitment of drug addicts for a period of not more than 2 years was authorized (ch. 413). Iowa added provision for a 30-day commitment for observation (ch. 128). Massachusetts (ch. 683) enacted a "sexual psychopath" law. Wisconsin considered such an act (Senate 486); at the time of writing information is not available as to whether the bill passed. Nebraska took the forward step (ch. 335) of substituting the words "mentally ill" for "insane" in its commitment law, and provided for voluntary admissions. South Dakota (ch. 137) enacted legislation authorizing temporary commitments.

BIBLIOGRAPHY

1. J. Crim. Law, **38**: 206, Sept.-Oct. 1947.
2. Arch. Neur. & Psychiat., **57**: 730, June 1947.
3. J. Crim. Law, **37**: 262, Nov.-Dec. 1946.
4. B. M. J., **1**: 498, Apr. 12, 1947.
5. Am. J. Ment. Def., **51**: 164, Oct. 1946.
6. Am. Practitioner, **1**: 479, May 1947.
7. Ibid., **1**: 484, May 1947.
8. Ann. med. leg. (Paris), No. 1, 24, Jan.-Feb. 1947.
9. Ky. Law Journ., **35**: 38, Nov. 1946.
10. Can. Bar. Rev., **25**: 251, Mar. 1947.
11. Ibid., **25**: 731, Aug.-Sept. 1947.
12. Yale Law Journ., **56**: 959, June 1947.
13. Baltimore: Oakridge Press, 1945.
14. Toronto: Ryerson Press, 1947.

Military Psychiatry

Now that many of the psychiatrists who served in the armed forces have returned to civilian life where they may review at some leisure(?) their military observations, we find a tendency toward more general considerations of the problems of military psychiatry, more plans for the future integra-

tion of psychiatry with the military service—and more books.

Menninger(1, 2) and Braceland(3) summarize their observations and offer suggestions for future development—the need of a continual recruitment of psychiatrists, of a nomenclature subject to constant revision, of coöperation with the other branches of the service, for instance. Brussel(4) is critical, *inter alia,* of the frustrations and the waste of experienced men; Koontz(5) likewise raises some queries. Gardner(6) discusses the rôle of the psychiatrist in a Naval disciplinary barracks, and Raines(7) some current problems of Naval psychiatry. A British expert committee's report(8) sums up the rôle of psychologists and psychiatrists in the services and makes recommendations of a highly constructive nature. The functions of the military clinical psychologist are described by Holzberg, Zlatchin, and Pivnick(9).

Two papers present the incidence of various psychiatric disturbances: one by Appel, Gilbert, and Hilger(10) and the other by Brodman, Mittelman, *et al.*(11).

The psychiatric work of the Veterans Administration is presented in papers by Blain and Baird(12), Powdermaker(13), and Tompkins and Snedeker(14).

A number of papers of clinical interest are found. Bellak and Parcell(15) discuss the prepsychotic personality of 100 cases of Navy schizophrenics; their findings are not consistent with the conventional notion of a prevailing introversion. Kirman(16) found an unusually low incidence of mental disorder in released prisoners of war (only about 1 per 1,000), with starvation diet apparently a minor factor. Kaplan(17) presents a case of proved malingering. Weiss (18) discusses psychoses in military prisoners. P. Solomon(19) considers the incidence of combat fatigue and the factors of motivation. Kartchner and Korner(20) present the use of hypnosis in the treatment of acute combat reactions, and Abrahams and McGorkle(21) describe the use of group therapy at an Army Rehabilitation Centre. W. C. Menninger(22) sums up the modern concepts of war neuroses.

In the field of books, the most comprehensive is the proceedings of the 1944 meeting of the Association for Research in Nervous and Mental Disease, recently put forth in book form(23). All 33 of the chapters are devoted to phases of military psychiatry and neurology. Kardiner and Spiegel's volume on *War Stress and Neurotic Illness*(24) is significant. Benedek's(25) study of the psychological effects of war (*Insight and Personality Adjustment*) presents another aspect of the problems of military psychiatry. For a popular presentation by a layman may be mentioned Cooke's *All but Me and Thee*(26)—sympathetic and readily comprehensible by the layman.

BIBLIOGRAPHY

1. Mil. Surgeon, **100**: 108, Feb. 1947.
2. Am. J. Psychiat., **103**: 577, Mar. 1947.
3. Ibid., **103**: 587, Mar. 1947.
4. Psychiat. Q., **20**: 610, Oct. 1946.
5. Mil. Surg., **101**: 204, Sept. 1947.
6. U. S. Nav. M. Bull., **46**: 1368, Sept. 1946.
7. Mil. Surgeon, **100**: 113, Feb. 1947.
8. H. M. Stationery Office, 1947.
9. Ment. Hyg., **31**: 605, Oct. 1947.
10. Am. J. Psychiat., **103**: 196, Sept. 1946.
11. Psychosom. Med., **9**: 45, Jan.-Feb. 1947.
12. Am. J. Psychiat., **103**: 463, Jan. 1947.
13. Ibid., **103**: 470, Jan. 1947.
14. Ibid., **103**: 467, Jan. 1947.
15. Psychiat. Q., **20**: 627, Oct. 1946.
16. J. Ment. Sci., **92**: 808, Oct. 1946.
17. J. N. & M. Dis., **106**: 46, July 1947.
18. J. Clin. Psychopathol., **8**: 689 (Part I).
19. Arch. Neurol. & Psychiat., **57**: 332, Mar. 1947.
20. Am. J. Psychiat., **103**: 630, Mar. 1947.
21. Dis. Nerv. Syst., **8**: 50, Feb. 1947.
22. Bull. Menninger Clin., **10**: 196, Nov. 1946.
23. Baltimore: Williams & Wilkins, 1946.
24. New York: Paul B. Hoeber, 1947.
25. New York: Ronald Press, 1946.
26. Washington, D. C.: Infantry Journal, 1946.

PSYCHIATRIC EDUCATION

CHARLES A. RYMER, M. D., DENVER, COLO.

The progress of psychiatry in medical education during the year 1947 has been furthered by (1) the passage of the National Mental Health Act, (2) the Committee on Psychiatry in Medical Education of the American Psychiatric Association, (3) the

Committee on Medical Education of the Group for the Advancement of Psychiatry, (4) The Menninger Foundation School of Psychiatry, and (5) the psychiatric teaching personnel of the medical schools.

There is little argument that sufficient and well-trained psychiatric personnel is not available to meet current needs. According to Felix(3), four times as many psychiatrists are needed. Binger(1) states that the minimum requirements for institutional work alone are 6,000 to 7,000 men. He estimates that the country could absorb 20,000 to 30,000 analytically trained psychiatrists in addition to the 400 to 500 being trained today. He complains that of the 4,000 psychiatrists in the country, only about 1,000 of them are engaged in active psychotherapy.

According to Menninger(7), of the 4,000 members of The American Psychiatric Association, 60% are devoting their full time to the treatment of 625,000 patients in state and federal institutions. The Veterans Administration could use all the first-class psychiatrists now available; according to Blain, 600 psychiatrists are now on service but they satisfy only one-third the needs. He estimates that, within 12 years, 7 times this number will be needed.

Perhaps this shortage may in some measure be accounted for by the fact that, according to Felix(3), not over half of the medical schools present psychiatry to the students in a satisfactory manner, and in one-third the psychiatric instruction was rated as indifferent or poor. Binger(1) states that of the 46 departments of psychiatry, about 20 are adequate and train about 50 to 75 qualified psychiatrists a year.

I. To meet this shortage of personnel the National Mental Health Act was passed in 1946. The act authorizes the United States Public Health Service to promote training and instruction in the field of mental health by means of grants-in-aid to public and nonprofit institutions for improving or developing their training facilities. These grants, according to Felix(3), have a three-fold purpose: 1. To provide adequate postgraduate training for those who elect to specialize in psychiatry. 2. To improve the undergraduate psychiatric training of all medical students. 3. To interest all medical students in the field of psychiatry as a specialty.

Since funds have been made available, the United States Public Health Service has awarded training grants to 17 institutions offering training in psychiatry. Felix(4) reports that 209 training stipends to graduate students have thus far been approved: 70 in psychiatry, 41 in clinical psychology, 40 in psychiatric social work, and 38 in psychiatric nursing. The shortage of psychiatrists is also evident in teaching personnel, and some schools have used part of their grants for training teachers at graduate and undergraduate levels.

According to Felix(4), "If a medical student is to become a well-rounded physician he must realize, in the process of his educational experience, that psychiatry is an integral part of medicine, and that understanding a patient's emotional life is quite as important as a knowledge of anatomy and physiology in making a correct diagnosis and carrying out treatment. Until psychiatry is presented in the proper light, it will be difficult to stimulate the interest of the medical student. It is hoped that . . . . psychiatry will be taught in a way which will challenge the student, if not to enter the field of psychiatry, at least to incorporate psychiatric concepts and attitudes into his medical practice."

The consultants in mental hygiene to the United States Public Health Service(3) have outlined the objectives of undergraduate instruction to be:

1. To teach fundamental concepts of human behavior, motivation, gratification, and conflict.

2. To teach the emotional experiences of sick people. The student should also be made aware of his own emotional relationship to his patient.

3. To teach that emotional disturbances as well as toxic, metabolic, or physical factors produce illness.

4. To teach an understanding of illness associated with or caused by disturbed cerebral metabolism.

5. To teach some classificatory knowledge of psychiatric diagnostic syndromes.

6. To teach useful diagnostic and interviewing techniques.

7. To assist the student in gaining insight into his own personality make-up and particularly his emotional biases, prejudices, and blind spots, preferably through intimate contact with the psychiatric teacher.

8. To give a reasonable concept of methods of psychotherapy and an appreciation of his own potentialities and limitations in this regard.

II. The Committee on Psychiatric Education of The American Psychiatric Association(2) has reported that during the past 15 years there is greater acceptance of psychiatry as a basic science; that psychiatric liaison divisions have doubled (now 17); psychiatric teaching hours have increased from 77 to 152 hours; clerkship and outpatient teaching have been added to the curriculum of many schools; 28 schools have developed the concept of the clinic team—social worker, psychologist, and psychiatrist; more full-time teachers are utilized in the teaching of psychiatry.

In addition, the Committee reports that during the past decade it has assisted in the formation of the American Board of Psychiatry and Neurology; encouraged the development of separate departments of psychosomatic medicine; held four conferences on psychiatric education; conducted five 2-week institutes held in widely separated parts of the country; established the basic three-year residency; improved standards whereby state hospitals would serve as teaching and research centers.

III. The Committee on Medical Education(5) of the Group for the Advancement of Psychiatry, composed of outstanding teachers of psychiatry, at a meeting in Rye, New York, November 1946, arrived at the following conclusions:

Undergraduate Education

(Education of the Medical Student)

1. Psychiatry must be recognized and taught as a basic science. It should be applied in all departments of medical school teaching from the first year throughout. It should infiltrate all of the medical curriculum, toward the education of the "whole doctor." It should supplement and complement the experience gained in other departments, and from the very beginning fuse with these other experiences.

2. There is evidence of increasing emphasis on psychiatry in many medical schools, the majority of which now claim that they teach psychiatry as a basic science.

3. Teaching should focus on "the person" involved in every case, but not with the intent of making a psychiatric specialist out of an undergraduate student.

4. Most medical school curricula are now in need of revision. To do this will require continued stimulation of students, overcoming of resistance of other faculty members, and preparing better teachers of psychiatry.

5. This committee recommends that more stress be placed on the social sciences and the humanities by medical schools as prerequisites for admission.

6. We recommend 375 hours as a reasonable allotment for psychiatric teaching at this time, but believe this can only be justified if there are sufficient competent teachers to use the hours effectively.

7. Instruction of first year students should be especially oriented to the understanding of aspects of normal experience. Courses in the principles of human adaptation, the development of personality from infancy, and the characteristics of psychological, behavioral and social data should be given, and practical supervision of elementary interviewing should be begun. "Psychiatry" should be retained as the main title of first year courses with subtitles when necessary: "Human Adaptation," "Personality Development."

8. Instruction of second year students should focus on the descriptive and dynamic principles of psychopathology, the psychology of the doctor-patient relationship, the dynamics of emotion and its relation to psychologic and social processes, and techniques of interviewing.

9. Instruction of the third and fourth years should be devoted chiefly to clinical work under close supervision. Twenty-five per cent of this time should be given to the study of psychiatric inpatients, and 75 per cent to the types of emotional problems common in general practice.

10. In order to implement psychiatry as a basic science successfully, the student must be introduced to the nature and use of psychological data during his first medical school year. Seminar and section work are considered generally preferable to lectures as a method of instruction from the first year on. Analysis of the student's autobiography is not favored as a teaching device.

11. Psychiatric help should be made available (to those students who need it).

12. Psychiatrists should be represented in the selection of students for admission to medical school. More studies are needed to improve selection procedures.

13. Instruction in social work and clinical psychology should be provided.

Graduate Education

(Education of the Interne and Resident)

1. The training of psychiatrists should aim at giving the student clinical familiarity and competence in appraisal and judgment of the interrelation between the phenomenology of mental, neurotic, and organic disease and basic unconscious motivation and mechanisms. Skill in the recognition of dynamics, methods of examination and treatment by psychotherapy, chemotherapy, and other methods, stress on the interrelationship of the patient and his environment, knowledge of psychiatry in its relationship to anthropology and contemporary culture, and some experience with research problems and methods, are all essential as a foundation for the practice of modern psychiatry.

2. Such a program of psychiatric training should focus on the dynamic approach to personality problems, and should provide for close relationship between teachers and students. Their case load should be kept small; conference and seminar methods are preferred to lectures.

3. A minimum training program should be three years. Six months should be spent on neurological and allied subjects. Six months should be spent on the study and treatment of psychoses. The remaining time should be given chiefly to the psychoneuroses, psychosomatic diseases, and nonincapacitating emotional disorders, to mental deficiencies, and juvenile delinquencies. The order in which psychiatric subdivisions are taught is not vital.

4. More teachers of high clinical and pedagogic competence must be recruited.

5. Careful selection of candidates for postgraduate clinical training is a most urgent need. Teachers should have broad clinical experience, a reasonable grasp of the methods, and knowledge in ancillary fields; they should also have special ability to communicate clearly. Experience with consultations in the general hospital and community are important. There should be acquaintance with the techniques of psychology, anthropology, psychiatric social work, and principles of psychiatric nursing. Individualization of training is indicated. There can be no rigid rules. Multiple points of view are important, to avoid standardization.

6. The requirement for certification by specialty boards must be met.

7. Opportunities for experience in teaching and research should be provided. Opportunity should also be provided the interne for the practical instruction of medical students, student nurses, and social work students.

8. A personal analysis and thorough psychoanalytic training are valuable to the psychiatrist, but should remain optional. Training in these subjects should be conducted in conformity with the requirements of the American Psychoanalytic Association.

9. Experience with children's problems under supervision is necessary to promote a fundamental understanding of emotional growth and personality development.

A forthcoming book, *Teaching Psychotherapeutic Medicine*(8), is a detailed report of the pilot course in Psychotherapy in General Practice given at the University of Minnesota in April, 1946. The book offers an excellent pattern for future development in postgraduate education.

IV. While many schools are offering training in graduate education, none has the elaborate program undertaken by the Menninger Foundation School of Psychiatry(6). To meet postwar demands the foundation set as its training objective "a balanced program of clinical and didactic instruction, integrated throughout and adequate to the requirement of general psychiatric practice." This program not only attempts to select the resident scientifically, but proposes to train him scientifically, a feat not too easily accomplished. Student guidance throughout is the watchword of the training program.

V. Granted the lack of trained psychiatrists in public and private practice, and insufficient psychiatric educators, what is being done by those psychiatrists responsible for the training of the undergraduate, graduate, and postgraduate to meet the recommendations of the Committee on Psychiatric Education of The American Psychiatric Association, and of the Group for the Advancement of Psychiatry? To answer this question we recently circularized the professors of psychiatry in 66 medical schools in this country. Responses were received from 41 schools relative to progress made in their schools during 1947.

In a review such as this only a summary can be given of the voluminous material received. The majority of professors described in detail their several teaching schedules, as well as their work with the Veterans Administration, United States Public Health Service, and other allied agencies in the promotion of mental health. The following data are noteworthy:

1. Several schools are in the process of revising the department of psychiatry both as to personnel and content. Some schools were without department heads during the war and this deficiency is now being remedied.

2. The need of additional, well-trained personnel was frequently mentioned. This, though, is not a major item, and many professors indicated that they are fortunate in obtaining the aid of analytically and non-analytically trained men.

3. There was general agreement that teaching in all the 4 years was essential, and if such had not been the case, necessary courses were being added to make it so, additional hours being added to the curriculum for this purpose.

4. The reports indicate a genuine desire on the part of the professors to make psychiatry a basic course integrated with all other branches of medicine, and no longer a "specialty." To this end, courses are being

developed to present psychiatry in medicine, pediatrics, obstetrics, and physical diagnosis.

5. A closer relationship between medicine and psychiatry has developed, wherein the department of medicine handles all psychosomatic problems. Courses in child guidance are also being given by the department of pediatrics.

6. The résumé of what the student is to learn during his 4 years in psychiatry was given by several. The report of Georgetown University is typical:

> It is the purpose of the Department to present teachings, principles, and practices of psychiatry which the student will be able to use intelligently when he begins the practice of medicine. All the teachings are based upon the fundamental principle of viewing patients as whole people, and not merely as sufferers of isolated diseases or symptoms. The student is taught to examine the person who has the disease, to discover the patient's attitude toward his illness, his background, social training, education, intelligence, personality traits, and all other factors which will assist him in outlining a specific course of treatment designed for the patient under study. The course extends through the 4 years of medical school.

7. The content of teaching has changed. The majority of answers indicate that greater emphasis is being placed upon a better understanding of the psychoneurotic and psychosomatic problems and of "psychodynamics."

8. In undergraduate teaching greater emphasis is being placed upon actual work with patients rather than dependence upon didactic lectures.

9. Outpatient and liaison departments are recognized as valuable teaching adjuncts and more use is being made of each. Some hospitals which suspended their outpatient facilities during the war have reopened them.

10. The majority of schools report that more men are in residencies than ever before. These residencies are usually of 3 years and are so designed to give the man sufficient psychiatric and medical knowledge that he may competently handle the problems seen in medicine today.

11. The training of clinical psychologists in the department of psychiatry is being undertaken by several schools.

12. The majority of schools reported training programs in connection with the Veterans Administration, or the United States Public Health Service.

13. Refresher courses, or some form of post-graduate education, have been offered by several schools.

14. Several schools reported building plans for the erection of psychiatric hospitals.

15. It has been suggested that residents specializing in psychiatry be granted a special degree, such as a Master of Science.

16. It is significant that the majority of schools are seeking men dynamically oriented, if not dynamically trained, for new teaching personnel and that many residents in psychiatry are being analyzed concurrently with their residency.

17. Progressive schools remarked the need of full-time men to administer the department of psychiatry, and justifiable salary increases have been made to attract well-qualified men to these positions.

18. An important move has been the inclusion of trained psychiatrists on the admission boards of medical schools. The Menninger group have set up criteria in the selection of the graduate student.

In summary, progress in psychiatric education for 1947 has been aided by the National Mental Health Act to assist schools in the training of psychiatric personnel; the recommendations of the Committee on Medical Education of the Group for the Advancement of Psychiatry; the contributions of teachers of psychiatry to undergraduate and graduate training.

We gratefully acknowledge the cooperation so generously given by the departments of psychiatry in response to our questionnaire.

BIBLIOGRAPHY

1. Binger, Carl. Harpers, Sept. 1947.
2. Ebaugh, Franklin G. Report to Council of the Amer. Psychiat. Assn., 1947.
3. Felix, Robert H. The National Mental Health Act. Ment. Hyg., **31**: 363, July 1947.
4. Felix, Robert H. The battle is joined. Survey, **82**: 233, 1947.
5. Group for the Advancement of Psychiatry, Report of the Committee on Medical Education. Circular Letter No. 29, May 1947.
6. Menninger Faculty. The Menninger Foundation School of Psychiatry. Bull. Menninger Clin., **11**: July 1947.
7. Menninger, William C. The rôle of psychiatry in the world today. Am. J. Psychiat., **104**: 155, 1947.
8. Smith, Geddes. Teaching psychotherapeutic medicine. To be published by Commonwealth Fund, 1947.

COMMENT

A MESSAGE FROM THE PRESIDENT

With the advent of the New Year, a few words to the membership are in order concerning the progress of the Association.

The Council met in New York City, December 13 and 14, and heard the reports of the numerous committees, nearly all of which have been active since the annual meeting. A few only of the significant points may be mentioned here.

The Committee on Reorganization submitted an outline of organization which would provide for a representative form of government of the Association—not unlike that of the American Medical Association. It seems quite likely that the Association has already outgrown the strictly democratic organization which now prevails; in any case, the membership will be given ample opportunity to familiarize themselves with the details of the plan, in order that they may act advisedly on the proposals at the 1949 meeting.

The plans of the Committee on Psychiatric Standards and Policies for a survey and rating of hospitals are proceeding, and the personnel of an Inspection Board will be announced in the near future.

The Committee on Program is diligently at work and promises a good variety of papers for the meeting next May, despite the late change of plans for the location of the meeting.

Negotiations are under way for the filling of the new position of Medical Adviser, and it is expected that a suitable appointment will soon be made.

From present indications a large attendance may be looked for at the Washington meeting. Reservations should be made as early as possible, through the offices of the Association. It is hoped that the Association may be largely represented at the International Congress on Mental Health, to be held in London, England, next August. Furthur details may be secured from Miss Nina Ridenour at the offices of the International Committee for Mental Hygiene, 1790 Broadway, New York City.

The officers of the Association extend to the entire membership their most cordial wishes for a prosperous and happy New Year.

WINFRED OVERHOLSER, M. D.,
President.

THE BOARD OF EDITORS

At the regular midyear meeting of Council in New York City, December, 1947, two new appointments were made to the editorial board of the JOURNAL.

To succeed Dr. Cheney, whose death occurred November 4, the board nominated Dr. C. Charles Burlingame, and his nomination was unanimously approved by Council. Dr. Burlingame has rendered considerable assistance to the editorial office over the years and has cheerfully placed at our disposal at all times the services of the science library of the Institute of Living. The staff of this library, whence emanates the valuable Digest of Neurology and Psychiatry, has given excellent cooperation, which the JOURNAL gratefully acknowledges. It is of interest that shortly before his death Dr. Cheney had expressed his own appreciation of Dr. Burlingame's qualifications.

With his close relations with professional, industrial, educational, and governmental bodies in the United States and his wide contacts in Canada, in the countries to the south, in Britain, and on the continent, Dr. Burlingame's contribution as a member of the editorial staff will be a valuable asset.

During the sessions of Council Dr. Hamilton expressed his desire to retire from the board, and there appeared to be no alternative but reluctantly to accept his resignation. Dr. Hamilton was one of the senior associate editors, having been appointed in 1936. The Editor desires to express his high

appreciation and gratitude for Dr. Hamilton's unfailing cooperation and support.

To fill the vacancy occasioned by Dr. Hamilton's retirement it was a pleasure to nominate Dr. A. A. Brill, of New York City. This nomination was likewise unanimously approved by Council and we are confident will give general satisfaction.

It was felt that Dr. Brill's appointment was particularly appropriate, not only because of his long membership and deep interest in the Association and his constructive participation in its affairs, but especially because he is the founder of the psychoanalytic school in this country and in his translations has made the basic Freudian texts accessible to readers unfamiliar with the German originals. He has also been a pioneer in teaching, having conducted lecture courses in psychoanalysis to graduate students at Columbia University for many years.

It is gratifying to record the gracious acceptance by Dr. Burlingame and Dr. Brill of appointment as associate editors of the JOURNAL.

JELLIFFE MEMORIAL ISSUE OF THE JOURNAL OF NERVOUS AND MENTAL DISEASE

Dr. Nolan Lewis and his editorial staff have done a very creditable and welcome piece of work in preparing this special (September) number of the Journal of Nervous and Mental Disease as a memorial to its late editor, Dr. Smith Ely Jelliffe, who directed the policies of the Journal from 1902 until his death in 1945.

This memorial issue has been expanded to 215 pages, contains an excellent portrait of Dr. Jelliffe, and a number of significant articles in addition to the special contributions relating to Dr. Jelliffe and his work. Dr. Brill contributes, along with a biographical sketch, an appreciation of Jelliffe's scientific achievements and a characteristic tribute to his genius. The article by Dr. Oberndorf deals specifically with the literary and historical contributions of Dr. Jelliffe. The tribute by Dr. Foster Kennedy reproduces his remarks at a meeting of the Charaka Club in April, 1946. Dr. Nolan Lewis's contribution, titled "Smith Ely Jelliffe, the Man and Scientist," in reviewing Jelliffe's career dwells particularly on his personal attitudes and changing points of view, his contacts with other scientists in various parts of the world and their mutual influences. There is appended a bibliography of Dr. Jelliffe's published material extending from 1890 to 1944 and filling 14 pages of this memorial issue. This special portion of the September Journal closes with the funeral oration delivered by Rev. Lucien Harper Kearns at Hulett's Landing, Lake George, New York, Sept. 27, 1945. This was the place to which Dr. Jelliffe had retired to pass his last days "beside the lake and among the hills he loved and called home."

Among the scientific contributions in this memorial issue, mention should be made of a thoroughgoing survey by Dr. Henry Alsop Riley of "The Present Status of Neurology in the United States." This contribution was Dr. Riley's presidential address before the American Neurological Association at Atlantic City, in June, 1947. It may be said to represent a continuation and bringing-up-to-date of his earlier survey titled "Neurologia Irredenta," which was the subject of his presidential address before the New York Neurological Society in 1932. In these two papers Dr. Riley has given a valuable review of the course of neurology as a specialty during recent decades, with particular reference to its relations to psychiatry and neurosurgery as well as to other branches of medicine. Dr. Riley's summary of the status of this discipline during the past quarter of a century "indicates that clinical neurology is not a dying discipline and, contrary to other analyses, that instead of being 'at an all-time low' it has never reached a higher level of activity or productivity than at the present time."

Dr. Lewis is to be congratulated upon the appearance of this well-deserved tribute to a great leader and at the same time an important contribution to the psychiatric record.

NEWS AND NOTES

INDUSTRIAL CONFERENCE ON ALCOHOLISM.—The first Industrial Conference on Alcoholism will be held on March 23 instead of March 15, as originally scheduled, in Chicago. Dr. Anton J. Carlson, of the University of Chicago, is chairman. The conference is sponsored by the Chicago Committee on Alcoholism and is designed to bring to the attention of industrial leaders throughout the country facts pertaining to the problem of alcoholic employees and to discuss ways of handling the problem.

Dr. John I. Norris, of the Eastman Kodak Company, Rochester, N. Y., will be the principal speaker at the conference luncheon. Dr. Norris, a Fellow of the American Association of Industrial Physicians and Surgeons and of the American Medical Association, will discuss the latest available data on alcoholism and industry.

DR. BIGELOW TO EDIT THE PSYCHIATRIC QUARTERLY.—Announcement has been made of the appointment of Dr. Newton J. T. Bigelow, director of Marcy (N. Y.) State Hospital, as editor of the Psychiatric Quarterly, succeeding the late Dr. Richard H. Hutchings.

Dr. Bigelow wrote for the December, 1947, issue of Mental Hygiene News, published by the New York State Department of Mental Health, an excellent biographical sketch of Dr. Hutchings and paid warm tribute to him as a "truly great humanitarian and scientist."

A continuation of the good work the Psychiatric Quarterly has carried on these many years under the guidance of Dr. Hutchings is assured in the hands of Dr. Bigelow, and the JOURNAL extends to him its best wishes.

1948 LECTURE SERIES AT INSTITUTE OF LIVING.—The fourteenth annual series of weekly conference talks at the Institute of Living, Hartford, Conn., begins January 14 and ends March 10, 1948. These discussions are designed to offer a comprehensive survey of the newer developments in psychiatry and related fields.

Speakers in the 1948 series are, in order, Dr. Walter Freeman (psychosurgery), Dr. Edward A. Strecker (etiology), Dr. S. Bernard Wortis (organic psychoses), Dr. Kenneth E. Appel (psychotherapy), Dr. Joseph C. Yaskin (practical psychiatry), Dr. William Sargant (abreaction with drugs), Dr. Franz Alexander (psychoneurosis), Dr. Henry Brosin (Rorschach), and Dr. A. Warren Stearns (milieu of the psychiatric case).

COURSE IN CHILD PSYCHIATRY FOR PSYCHIATRIC RESIDENTS.—A 9-months course in child psychiatry is now being offered to the psychiatric residents of the Veterans Administration Hospital, Bronx, N. Y., in cooperation with the Child Guidance Institute of the Jewish Board of Guardians, New York City. The course of instruction covers 17½ hours weekly and includes theoretical material on child development; psychopathology and psychotherapy of children; social casework principles and community resources. In addition, an opportunity is provided for supervised treatment of children and mothers. The teaching faculty includes Dr. J. H. W. Van Ophuijsen, chief psychiatric consultant of the Child Guidance Clinic, Dr. Maurice R. Friend, psychiatric training supervisor, and Oscar Sternbach, casework consultant.

WESTERN SOCIETY OF ELECTROENCEPHALOGRAPHY.—This newly organized society held its first scientific meeting at the University of California Hospital, San Francisco, November 8, 1947. A constitution was adopted that offers active membership to physicians actively engaged in the field of electroencephalography. Investigators in related fields are eligible for associate membership.

The following officers were elected: Dr. Robert B. Aird, San Francisco, chairman; Dr. Knox H. Finley, San Francisco, vice-chairman; and Dr. Nicholas A. Bercel, Los Angeles, secretary-treasurer.

The program committee: Dr. Knox H.

Finley (chairman); Dr. Robert B. Aird; Dr. Nicholas A. Bercel; Dr. Hale Haven, Seattle; and Dr. Robert S. Dow, Portland.

The membership committee: Dr. Henry Newman, San Francisco (chairman); Dr. John Moriarty, Los Angeles; Dr. Aird; Dr. Finley; and Dr. Bercel.

The next meeting will be held in San Francisco, April 10 and 11, directly preceding the annual meeting of the California Medical Association. Those wishing to contribute papers are invited to notify the member of the program committee in their vicinity. Those interested in joining the society can secure application blanks from the secretary-treasurer, Dr. Bercel, Cedars of Lebanon Hospital, Los Angeles.

NEW CHIEF OF CLINICAL PSYCHOLOGY, VETERANS ADMINISTRATION.—Appointment of Dr. Harold M. Hildreth, Ph. D., as chief of clinical psychology for the Veterans Administration was announced recently by Dr. Paul M. Hawley, Chief Medical Director. Dr. Hildreth currently is serving as chief of clinical psychology in the VA branch office in San Francisco. He has been psychologist and consultant in psychology at the Syracuse Psychopathic Hospital and was a senior psychologist for the U. S. Navy during the war.

Dr. Hildreth will succeed Dr. J. G. Miller, who has resigned to accept the chairmanship of the department of psychology at the University of Chicago. Dr. Miller has been VA's chief of clinical psychology since February, 1946.

DR. GEORGE RIDDOCH, BRITISH NEUROLOGIST.—With the death of Dr. George Riddoch in October, 1947, British medicine lost an outstanding neurologist. He was physician to the London Hospital and director of the Department of Neurology and Psychiatry, and physician to the National Hospital for Paralysis and Epilepsy, Queen Square. Dr. Riddoch's work derived impetus and direction from that of Head and Hughlings Jackson, and he made valuable contribution to the physiological interpretation of human nervous disorders. As one of his major activities, he was a brilliant teacher. During the last war, Dr. Riddoch became civilian consultant in neurology to the British Army and later, with the rank of brigadier, organized the army medical neurological service. His war work earned for him the comment by the British Medical Journal that he was "the most respected British neurologist in France."

FEDERAL GRANTS UNDER THE NATIONAL MENTAL HEALTH ACT.—The following institutions have been awarded Federal grants to support their training programs:

Psychiatry: University of Pennsylvania, The Menninger Foundation, Boston Psychopathic Hospital, University of Cincinnati, Chicago Institute for Psychoanalysis.

Clinical psychology: University of Kentucky and Tulane University.

Psychiatric social work: Washington University (St. Louis).

In addition to certain other grants for research, previously awarded, the following new grants have been announced:

Psychiatry: University of California; neuropathology: Columbia University College of Physicians and Surgeons; behavior studies: Roscoe B. Jackson Memorial Laboratory, Bar Harbor, Maine; education and psychology: Mu Iota Sigma Fraternity, Illinois School for the Deaf, Jacksonville, Illinois; social work: Wayne University School of Public Affairs and Social Work, Detroit; and psychology: Wesleyan University, Middletown, Conn.

POSTGRADUATE INSTITUTE IN KENTUCKY.—A Postgraduate Institute in Psychosomatic Medicine and Mental Hygiene will be presented in Lexington, Ky., Feb. 3-6, 1948. This Institute is being organized by the Kentucky State Medical Association, the Kentucky Psychiatric Association, and the Kentucky Department of Health, in cooperation with the United States Public Health Service, using funds from the appropriation provided by the National Mental Health Act. The Institute will be open to all medical doctors; it will include symposiums on drug addiction and infant and child behavior, as well as lectures on the psychological aspects of disease. Speakers will be specialists in psychiatry and other fields, drawn from Ohio, Kansas, Michigan, Minnesota, Iowa, Maryland, Illinois, and Kentucky.

DR. MORRIS APPOINTED TO UNIVERSITY OF IOWA.—Dr. Woodrow M. Morris has been appointed assistant professor of clinical psychology and senior psychologist at the psychopathic hospital at the State University of Iowa, effective February 1, 1948. Dr. Morris has held the position of director and chief psychologist, Division of Special Clinical Services, Institute of Human Relations, University of Michigan.

SOCIÉTÉ SUISSE DE PSYCHIATRIE.—An unusually large attendance marked the 108th assembly of this vital European society at Zurich, November 22, 23, 1947. The Society meets regularly twice each year. The hospitality of the vast institution, Burghölzli, under the direction of Professor Bleuler, was extended to the members and guests; and the meeting enjoyed the guidance of Professor Morel, to whom high tributes were paid.

The main topic of discussion was psychotherapy: its possibilities and limitations. It was dealt with comprehensively by Dr. Flournoy of Geneva and Dr. Boss of Zurich.

POSITIONS IN COMMUNITY MENTAL HEALTH WORK.—The U. S. Public Health Service has received information that the following positions are available for psychiatrists:

Alabama: Director of state mental hygiene program, State Dept. of Health, $5,100 to $7,100.

Colorado: Psychiatrist, State Division of Public Health.

Georgia: Director, Division of Mental Hygiene, Dept. of Public Health, $6,600.

Idaho: Psychiatrist, Dept. of Public Health, $3,060 (half time).

Kentucky: Director, Division of Mental Health, State Dept. of Health.

Michigan: Director, Child Guidance Clinic, $7,560 to $8,760. Fellow in Child Guidance, $4,020 to $4,740.

Nebraska: Two psychiatrists for child guidance clinic, $7,440 and $6,600. Clinical psychiatrist, $4,020. Two clinical psychiatrists with teaching responsibilities, $7,500 and $8,000.

North Carolina: Three psychiatrists for state mental hygiene program, $7,500, $6,000,and $5,000.

Tennessee: Director of state mental hygiene program, Dept. of Public Health, $5,640 to $8,400.

Utah: Psychiatrist, State Dept. of Public Welfare, $8,000.

For additional information about these positions, write to the Mental Hygiene Division, U. S. P. H. S., Federal Security Bldg., South, Washington 25, D. C.

ANNALS OF THE ORGONE INSTITUTE.—Announcement has been received that Volume 1, Number 1 of this new publication recently appeared. The Annals replaces the International Journal of Sex-Economy and Orgone Research, published from 1942 to 1945. Publisher of the Annals is the Orgone Institute Press, 157 Christopher St., New York 14, N. Y., and the editor is Dr. Theodore P. Wolfe, 401 E. 56th St., New York 22. This journal and its predecessor have been the vehicle for the contributions of Dr. Wilhelm Reich.

COLUMBIA-GREYSTONE PROJECT.—A symposium on the problems of the human frontal lobe will be held at the Academy of Medicine, New York City, on March 18 and 19. The symposium is based on work being done at the New Jersey State Hospital, Greystone Park, in collaboration with Columbia University. Members of the American Psychiatric Association are invited to attend.

WOMEN VETERAN PATIENTS IN VA HOSPITALS.—The Veterans Administration announces that, as of October, 1947, there were 2,035 women veterans hospitalized under VA care. Of these, 57% were general medical and surgical patients; 12% had tuberculosis; 25% were psychotics; and 6% had other neuropsychiatric disorders.

CITATION.—Following is a citation for the Bronze Star Medal awarded to Major William L. Sharp per General Orders 82.

Major William L. Sharp, 0468282, Headquarters, 99th Infantry Division, United States Army. For meritorious service in connection with military operations against the enemy from 9 November 1944 to 8 May 1945, in Belgium and Germany. In his capacity of division neuropsychiatrist, Major Sharp discharged his duties in an exemplary manner. He was responsible for the care, treatment, and disposition in the division clearing station of all battle casualties having combat exhaustion and neuropsychiatric disabilities, salvaging 44.2% of all such casualties, thus availing additional manpower and avoiding a great wastage of combat strength. In addition to his specialized duties, he assisted his colleagues in caring for the sick and wounded. Major Sharp's sound professional skill, sterling character, and unremitting devotion to duty reflect creditably upon himself and the Medical Corps and are worthy of commendation.

THE AMERICAN BOARD OF PSYCHIATRY AND NEUROLOGY, INC.

The following were certified at New York City, December 15-16-17, 1947.

PSYCHIATRY

Abrahamsen, David, 1040 Park Ave., New York 28, N. Y.
Babcock, Henry Holmes, 305 Blackstone Blvd., Providence, R. I.
Beigler, Jerome S., 30 W. Washington St., Chicago 2, Ill.
Berghorst, John, Box C, Traverse City, Mich.
Biele, Albert M., Norristown State Hosp., Norristown, Pa.
Bird, Lee Coulthard, 105 Pleasant St., Concord, N. H.
Blumer, Bertha, Vet. Admin. Hosp., Downey, Ill.
Brookes, Robert Dunlap, 1652 S. Grand Blvd., St. Louis, Mo.
Brown, DeWitt C., Jr., Station H., Central Islip, N. Y.
Brown, James E., St. Lawrence State Hosp., Ogdensburg, N. Y.
Cammer, Leonard, 59 E. 73rd St., New York 21, N. Y.
Chernus, Jack, 61 Lincoln Park, Newark 2, N. J.
Demuth, Edwin L., 171 East Post Road, White Plains, N. Y.
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Frank, John Alfred, 154 W. 57th St., New York 19, N. Y.
Franklin, Philip L., 936 W. 5th Ave., Gary, Ind.
Freeman, William Kirksey, Vet. Admin. NP Hospital, Los Angeles, Calif.
Geshell, Stanley W., 1030 Kearney St., Denver, Colo.
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Goodman, Soll, 61 E. 66th St., New York 21, N. Y.
Gorton, Mary Malinda, 400 Broadway St., Gary, Ind.
Hall, Robert J., Wassaic State School, Wassaic, N. Y.
Hammond, Edward Lee, New York Hosp., Payne Whitney Clinic, New York, N. Y.
Hardgrove, Thomas J., Vet. Admin., Waco, Tex.
Harris, Ralph Nathaniel, Vet. Admin. Center, Togus, Me.
Harris, Thomas Anthony, Bureau of Med. and Surgery, Navy Dept., Washington, D. C.
Hellmer, Charlotte Ellen, Norristown State Hosp., Norristown, Pa.
Henne, Frank R., Marcy State Hosp., Marcy, N. Y.
Hilger, David William, 725 High St., Topeka, Kans.
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Hudson, Robert James Apt. 4, 7500 Penn Ave., Pittsburgh, Pa.
Hunter, Harriot, Univ. of Colorado, 4200 E. 9th Ave., Denver, Colo.
Inwood, Eugene Richard, Walter Reed Gen'l Hosp., Washington 12, D. C.
Jackson, Benjamin F., Vet. Admin. Hosp., Fort Lyon, Colo.
Jacobs, James S. L., Clifton Springs San. and Clinic, Clifton Springs, N. Y.
Jerrell, P. M., Veterans Hosp., Murfreesboro, Tenn.
Johnston, William Cecil, Matteawan State Hosp., Beacon, N. Y.
Kapp, Frederic T., Cincinnati Gen'l Hosp., Cincinnati, Ohio,
Kelley, Douglas McGlashan, Bowman Gray School of Med., Winston-Salem, N. C.
Kohlbraker, George H., Norristown State Hosp., Norristown, Pa.
Kotzin, Isadore, Vet. Admin. Hosp., Coatesville, Pa.
Laughlin, E. Ross, Willard State Hosp., Willard, N. Y.
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Mason, Irwin, 144-50 7th Ave., Flushing, L. I., N. Y.
Mendell, David, Langley Porter Clinic, San Francisco, Calif.
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Meyer, George I., Vet. Admin. Hosp., Roanoke, Va.
Miller, Alva Edward, Fitzsimons Gen'l Hosp., Denver, Colo.
Moore, George Ensley, 135 W. Wells St., Milwaukee 3, Wisc.
Moore, Marlin C., Pratt Vet. Admin. Hosp., Coral Gables, Fla.
Nagler, Simon H., 15 East 36th St., New York 16, N. Y.
Nelken, Sam, 408 Cherokee St., New Orleans 18, La.
Nie, Louis William, Indiana Univ. Med. Center, Indianapolis, Ind.
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Olinick, Stanley L., 1354 27th St., N. W., Washington 7, D. C.
O'Neill, Francis John, Central Islip State Hosp., Central Islip, N. Y.
Orr, Eli Holmes, Vet. Admin. Hosp., Fort Custer, Mich.
Pace, William David, Boston State Hosp., Boston, Mass.
Peffer, Peter A., Vet. Admin. Hosp., Roanoke, Va.
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Rosen, Harold, Phipps Psych, Clinic, Johns Hopkins Hosp., Baltimore, Md.
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Rottersman, William, Vet. Admin. Hosp., North Little Rock, Ark.
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Samuels, Solon David, Bellevue Hosp., Psych. Div., New York, N. Y.
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Scheinker, Ilya Mark, Cincinnati General Hosp., Cincinnati, Ohio.
Westerberg, Martha R., Univ. Hosp., Ann Arbor, Mich.

PSYCHIATRY AND NEUROLOGY

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* Denotes complementary certification.

BOOK REVIEWS

MEDICINE IN THE CHANGING ORDER. Report of the New York Academy of Medicine Committee on Medicine and the Changing Order. (New York: The Commonwealth Fund, 1947.)

The New York Academy of Medicine Committee on Medicine and the Changing Order undertook to study the relationships of social and economic changes to medicine, and "to determine how the best elements in the science of medicine and in its services to the public may be preserved and embodied in whatever new social order may ultimately develop." While the Committee has already projected and published a dozen monographs, this report summarizes for the Committee as a whole its work over 3 years at a cost of over $50,000, contributed by the Commonwealth Fund, the Milbank Memorial Fund, and the Josiah Macy, Jr. Foundation. The money has been well spent.

Here is set forth in a most readable and attractive form the origins of the present problems in American medicine, the many aspects of the present problems, and the Committee's recommendations for meeting the problems. Conclusions and recommendations have thus been drawn from a broad and deep study of facts; they are free from personal bias and free, too, from any Utopian suggestions or finality.

There is agreement on the part of the Committee "that medical service is not now optimally organized, supervised, or distributed; . . . . that medical service should eventually provide everything that science can offer toward the preservation of health and the cure of disease, and that it should make available these benefits to the entire population." The provision of such services, however, is by no means simple. "It is misleading," the report reads, "to think in terms of '*the* problem of medical care'." There are "many problems involving different types of service, distinct groups and localities, varying public attitudes, professional views, and scientific standards . . . . they conform to no common overall pattern. . . . . There has been much discussion of *the* problem of the costs of medical care, from which conclusions are easily drawn about *the* solution of it all. Such oversimplification is enticing because it promises to settle everything promptly, but it is also misleading and dangerous." Not only quantity but quality of medical care is to be considered; the setting up of new poorly-staffed schools or expansion of present schools beyond their capacity could rapidly increase the quantity of medical service but the quality would suffer and, instead of solving the problem, a new one, and a very serious one, would be created. Preventive medicine is stressed, perhaps unduly stressed, as the bringing of relief, physical and mental, must still remain a fundamental function of the family physician, the indispensable in the profession. Nursing presents a problem in itself which is not easy to solve. Standards must be maintained or raised but "on the whole, there seems a real need for increasing the number of trained, licensed practical nurses. This type of nurse has an important rôle to play in caring for persons—particularly the growing number of chronic or convalescent patients—who may not need graduate nurse service." Hospital services, it is demonstrated, can be more closely integrated with the medical services of the community, with mutual benefit. The advantages and disadvantages of compulsory and voluntary medical insurance are well weighed. The Committee believes that "medical insurance is one of the essential requirements in solving the problem of medical care distribution; . . . . that compulsion by government would accelerate the extension of insurance to all the people; . . . . and that voluntary insurance will spread only slowly and incompletely among the low-income families. It is at the same time convinced that voluntary insurance provides flexibility for local initiative and is designed to encourage new and better methods of organized medical services, such as group medical practice, within the physical and personnel limitations of each area. It conceives voluntary insurance as an essential experiment in prepayment, which avoids the pitfalls of compulsory insurance. For these reasons the Committee believes that everything should be done, by way of grants, subsidies, and employers' contributions, to hasten the growth of voluntary medical insurance. . . . . The Committee stands confirmed in the conviction that providing more and better care for the people is a task that will require many years for its achievement; that it can be accomplished only step by step and in a cumulative and accelerating fashion. Those who believe that it can be accomplished quickly, and chiefly through legislative enactments, are, in the Committee's conviction, grossly in error and their proposals place in jeopardy the very aims they have in mind."

This volume, commendable even in its brevity, should be read by all interested in American medicine, the public, general physicians, specialists, teachers, nurses, hospital administrators, and public health officials, and particularly by those who feel competent to find a ready solution for every problem. Medicine and the public are under a debt of gratitude to the Committee individually and collectively, and to the Commonwealth Fund for making this report available in such attractive form.

N. E. MCKINNON, M. D.,
University of Toronto.

INSIGHT AND PERSONALITY ADJUSTMENT. A STUDY OF PSYCHOLOGICAL EFFECTS OF WAR. By *Therese Benedek, M. D.* (New York: Ronald Press, 1946.)

Dr. Benedek's book is much broader and comprehensive than its title indicates. It is really a discussion of human relationships, personality adjustments, and personality development. To be sure,

it is oriented to the adjustments of the soldier, his family and children, during the war, and the effect of the war on all these when the soldier becomes a civilian. But it also discusses problems and adjustments of families, parents and children, in the present organization of society with its new economic and industrial developments, changing attitudes of men and women toward work and changing attitudes (and struggles) of the sexes toward one another. Part One, on The Individual, is an excellent account of personality development through marriage, from the psychoanalytical point of view. As such it can be recommended as profitable reading to medical students, doctors, and interns beginning their study of psychiatry. Its psychological and sociological contributions, therefore, should give it a wider appeal and usefulness than its title would suggest.

The book is concerned with a presentation of the dynamic forces which are involved in the individual's adjustment to war and to the peace that comes after. Peace practically becomes civilian life in its broad relationships of family, work, sex, and society. As such it discusses factors at work not only in the individual but in society and their interrelationships. It is a much broader (and more valuable) discussion than merely the effect of war on peace-time reactions.

The author believes that "knowing the dynamic forces involved in this struggle one may predict some aspect of the future, and one may even influence it: one may further the good, the positive forces, and one may impede the destructive, harmful ones."

In the first part of this book, the psychoanalytic concept of the development of the individual is presented briefly. The author demonstrates for the reader "that every experience shapes the psychological conditions for future experiences; that the person cannot be understood without an evaluation of the influence of the past."

Dr. Benedek is concerned with the soldier and his adjustment in the second part of the book, of how with one part of his personality he learns to become a part of the army, and with the other part, he struggles to preserve his past personality and strives away from his military life. When he returns home, he is faced with a new struggle, for now he must incorporate his army experiences as part of his personality. Failure to do this successfully leads to diffculties in his adjustment to civilian life, and may result in neuroses.

The third part of the book is concerned with the family in war. It is a splendid discussion of the relationship of the soldier to his parents, siblings, wife, and children, and of the personality adjustments each must make in the time of war.

In a chapter on parenthood in war, Dr. Benedek discusses the increased birth rate during war, and the psychological factors contributing to this. The child becomes for the woman not only the fulfillment of her wishes and fantasies related to motherhood, but also serves as a denial of the separation from her husband. In the man faced with the dangers of war, the desire for reproduction becomes a process of reparation, a means of overcoming anxiety.

In the fourth and final part of the book, the effect of the war on men and women and sexual mores is discussed. The account of new attitudes of men and women toward each other, with their conflicts and tensions, not only as a result of the war but also as a result of new economic and industrial conditions, is presented in a penetrating and stimulating discussion.

The author has directed this book primarily to social workers, clergymen, teachers, counselors, and psychologists. It should prove valuable to many in this group in understanding the dynamic forces involved in the individual adjustments to war, and the readjustment to peace, not only with regard to personal, family, and sex relationships but also in the broader aspect of work, economic, and social adjustments.

KENNETH E. APPEL, M. D.,
Philadelphia.

THE ANALYSIS AND CONTROL OF HUMAN EXPERIENCES. (The Individual Seen through the Rorschach.) By *Paul Maslow.* Brooklyn: Multigraphed edition with paper covers, 1946 and 1947.)

"If it be true that good wine need no bush, 'tis true that a good play needs no epilogue. Yet to good wine they do use good bushes; and good plays prove the better by the help of good epilogues."
—SHAKESPEARE: Epilogue to "As You Like It."

The author of this two-volume tome introduces most of his chapters by quotations indicative of very wide reading. It seems appropriate that this review be introduced by a quotation which is also relevant but fetched from afar. If Shakespeare's remarks can be taken to refer also to good books, then Mr. Maslow's book is very much in need of an epilogue. It contains neither preface nor summary to indicate the audience for whom it is intended or the function it is expected to fulfill. It contains many ideas which might be of interest to Rorschach specialists, but these are diluted by ambitious generalizations and mixed with discussions on social philosophy which seem hardly relevant to the starting point of the book. The Rorschach data which are included suggest that the author has a considerable knowledge of the technique and a profound understanding of people, but he presents these data dogmatically, without evidence, and makes constant use of an apparently original and almost neologistic scoring system, with no explanation of its origins. Many of his sociological ideas are also profound, and his future prophecies are indicative of a most fertile imagination. However, the connections of these with the Rorschach method are extremely tenuous, and the route by which they have been reached most circuitous. If there is a contribution from the Rorschach method to social science, the author has obscured it by circumstantiality and excessive ambition. There are many typographical errors, suggesting a hasty printing, and the footnote on the very first page of Volume One makes reference to a bibliography supposed to be presented in that volume but not appearing until the second volume

dated in the following year. The book was apparently not conceived as a whole nor finished with care toward a definite purpose.

There are two reasons for printing a review of it. One is to warn others that its pearls can be gleaned only at the expense of much wasted reading. The other is to give recognition to the brilliance of the author, which requires harnessing into more useful channels. There is much in the book which could profitably be printed if it were rewritten several times to eliminate the circumlocution of the author's spontaneity. Some of the chapters could be published, with some revision, as essays on a great variety of topics. Better still, collaboration with someone of a different temperament might enable the author to make a unique contribution to the integration of the Rorschach technique with psychopathology. At present the volumes are unique, but their contribution is not clear.

W. Donald Ross, M. D.
Verdun Protestant Hospital, Montreal.

Youth in Trouble (Studies in Delinquency and Despair). By *Austin L. Porterfield.* (Fort Worth, Texas: The Leo Potishman Foundation, Publications in the Social Sciences, 1946.)

Written by the professor of sociology at Texas Christian University, this 135-page brochure was issued under the auspices of the Leo Potishman Foundation, an agency subsidizing publications in the social science field. In simple and elementary fashion, this work introduces the general question of juvenile delinquency and discusses a number of its special implications. Its primary concern, it should be stated, is the offender whose delinquency is not essentially incidental but appears to be truly symptomatic of personal maladjustment in the social situation. The importance of social elements and vectors is strongly stressed, likewise the necessity of intelligent and informed effort and organization on the social level, if any adequate meeting of the problem is to be expected. Case illustrations are freely utilized and a comprehensive bibliography is supplied, and for the reader without any special orientation or background in this field, this presentation should be informative.

T. R.

Recreation and the Total Personality. By *S. R. Slavson.* (New York: Association Press, 1946.)

This book presents a rather labored analysis of recreation in relation to the individual as a whole and in relation to the total situation. The ideas presented are excellent; it is the labored analytic approach that tends to cloud their value. One can hardly find fault with the idea that recreation is essential for both physical and mental health; nor with the thesis that it is an excellent medium for the discharge of unconscious drives, especially sublimations of unsatisfied sexual, sadistic masochistic, aggressive, and creative trends. One feels especially warm toward his accusation that many organized recreational outlets tend to foster the infantile tendencies in the participants. He points out that this fails to train the individual for life in a democracy which requires adult emotional attitudes. In attempting to fit recreational activities to the needs of the individual he considers the normal course of development in growing up. The practical application of this principle finds itself in the "Central Intake," where the interests, capacities, and personality problems of the individual are considered. The aim is to develop an "articulate community," based on the participants, under some guidance, having rather free choice of activity and major responsibility for carrying it out. The end in view is to encourage the growth of democratic attitudes through experience. The working out of the method, and the technique through which it is worked out, are amply illustrated by sample material. The discussion of leadership in group recreation is excellent, and there is a fine discussion of the available community resources.

On the whole, this volume contributes a good many valuable ideas on the democratic development in recreation, and the use of the group as a force toward the growth of the individual members. It can be highly commended to all those interested in recreation and education, either from the viewpoint of the normal or from the viewpoint of therapeutics.

Lawrence F. Woolley, M. D.,
Atlanta, Ga.

NOTICE

Exhibition Material—Annual Meeting

All those having scientific equipment of value to show at the annual meeting in Washington, D. C., May 17-20, please communicate directly with Dr. Robert H. Felix, U.S.P.H.S., Room 3018, Federal Security Bldg., Washington, D. C., giving full information concerning the type of material and the kind and amount of space required.

Those having movies on psychiatric subjects should immediately communicate with Dr. John P. Lambert, Four Winds, Katonah, N. Y., stating title, character of film, millimeters, and number of running feet.

IN MEMORIAM

VACLAV HORACE PODSTATA

1870–1947

Dr. Vaclav Horace Podstata was born on April 24, 1870, near Prague, Czechoslovakia. He came to the United States at 19 years of age. He had two medical degrees, having graduated from the Chicago Homeopathic Medical College in 1895 and from the University of Illinois College of Medicine in 1900. He did postgraduate work at the Brain Pathology Institute in Zurich, Switzerland, and other European psychiatric clinics. From 1896 to 1902 he was assistant physician and acting chief of staff at the Eastern Hospital, Kankakee, Illinois. Following this for a year he was physician in charge of the Oak Wood Sanitarium at Lake Geneva, Wisconsin. From 1903 to 1906 he was superintendent of the Dunning Institutions, Chicago. From there he went to the Elgin State Hospital, Elgin, Illinois, where he was medical superintendent from 1906 to 1910. During 1910-11 he studied abroad.

In 1911, Dr. Podstata was recommended by Dr. Peter Bassoe of Chicago for a teaching position at the University of California School of Medicine. Dr. Herbert C. Moffitt sponsored his appointment and he was on the staff of the Medical School from 1911 until 1928, at which time he retired with the title of Associate Professor of Psychiatry, Emeritus. At that time the teaching of psychiatry consisted in eight didactic lectures given during the senior year.

Dr. Podstata was also superintendent of Livermore Sanitarium from 1911 to 1928, when he took up private practice with offices in San Francisco and Berkeley. He was psychiatrist for the Berkeley Schools from 1926 to 1938. He owned, and was in charge of, the Rose Avenue School for Maladjusted Children.

He was a member of the American Medical Association, a Fellow of the American Psychiatric Association, a diplomate of the American Board of Psychiatry and Neurology, a member of the Northern California Mental Hygiene Society and of the Society for Nervous and Mental Disease for Northern California. He belonged to Alpha Omega Alpha and Nu Sigma Nu.

Dr. Podstata was among the first to introduce child psychiatry on the west coast. He had an important influence on the development of psychiatry over the past 35 years and is remembered as a capable teacher and well liked by all those who were associated with him. He died on August 15, 1947, of pneumonia, and is survived by his widow, Mrs. Mary Graham Podstata, of Berkeley, California.

K. M. B.